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ABSTRACT

Locating and describing successful articulation efforts among postsecondary institutions in local communities was the goal of a joint study by the American Vocational Association and the American Association of Community and Junior Colleges. Nominations of community-based programs were solicited from state directors of vocational education and community colleges by mail. Two hundred and three nominations were received and were arranged by type of institution, geographical location, and eleven other key variables, e.g., per capita expenditures on education, governance structure of institutions. From the 203 nominations, a representative non-random sample of 22 locations was drawn up for two-day site visitations. Approximately 300 administrators, faculty, students, and community leaders were interviewed. Of the 22 sites visited, nine locations involving nine community colleges and five area vocational schools were judged to be practicing successful articulation when assessed against 10 criteria. Four major barriers to articulation--competing external expectations of special interest groups, sterotyped perceptions of programs and practices of other institutions, a trend toward providing a common set of educational services, and conflicting educational values--were overcome by the exemplary articulation sites by clarifying common goals, identifying areas of potential benefit through collaboration, and by initially articulating programs and practices which lent themselves to standardization of procedures. (Author/JH)

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Final Report

Project No. 498AH60375
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EDUCATION AND TRAINING: A GUIDE TO INTERINSTITUTIONAL COOPERATION

David S. Bushnell
American Association of Community and
Junior Colleges
American Vocational Association

Washington, D. C.

July, 1978

The research reported herein was performed pursuant to a contract with the Office of Education, U.S. Department of Health, Education, and Welfare. Contractors undertaking such projects under Government sponsorship are encouraged to express freely their professional judgment in the conduct of the project. Points of view or opinions stated to not, therefore, necessarily represent official Office of Education position or policy.

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Locating and describing successful articulation efforts among postsecondary institutions in local communities was the goal of a joint study by the American Vocational Association and the American Association of Community and Junior Colleges. Nominations of community-based programs were solicited from state directors of vocational education and community colleges by mail. Two hundred and three nominations were received with a response rate of states contacted of 74 percent. The nominations were arranged by type of institution, geographical location, and eleven other key variables, e.g., per capita expenditures on education, governance structure of institutions, and representative non-random sample of 22 locations drawn up for two-day site visitations. Approximately 300 administrators, faculty, students, and community leaders were interviewed. Of the 22 sites visited, nine locations involving nine community colleges and five area vocational schools were judged to be practicing successful articulation when assessed against 10 criteria.

Four major barriers to articulation—competing external expectations of special interest groups, sterotyped perceptions of programs and practices of other institutions, a trend toward providing a common set of educational services, and conflicting educational values—were overcome by the exemplary articulation sites by clarifying common goals, identifying areas of potential benefit through collaboration, and by initially articulating programs and practices which lent themselves to standardization of procedures.

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ACKNOWLEDGEMENTS

A little over two years ago, in a crowded jet enroute from Volvograd to Tibilisi, Russia, three passengers from the U. S. were joined in conversation. The discussion centered on the need to develop effective working relationships between community colleges and area vocational schools. The discussion was motivated by recent debates in the U.S. on proposed amendments to vocational education legislation. The differences in viewpoints expressed during those debates prompted the trio to weigh carefully the underlying causes of the controversy.

William Pierce, then Deputy Commissioner for Occupational and Adult Education, at the U.S. Office of Education; Victor Van Hook, at that time president of the American Vocational Association; and Edmund J. Gleazer, Jr., president of The American Association of Community and Junior Colleges were the three erstwhile explorers, part of a team visiting vocational institutions in the Soviet Union under the East-West cultural exchange agreement. The outcome of their discussion was a national study resulting in this final report.

Building on the tentative agreement reached in Russia, the two associations, with backing from the U.S. Office of Education, undertook to explore why some institutions were able to negotiate cooperative relationships for the purpose of establishing congruence among local program offerings. This initial thrust of the cooperative effort between the two national associations evolved into a national survey of state directors of community colleges and vocational education, which eventuated in 22 site visitations around the country, five regional conferences, and one national conference on exemplary articulation practices.

Several tangential benefits emerged from this undertaking as well. Through the mechanism of a joint National Advisory Council, a working relationship between AACJC and AVA was established. Articles and editorials in the two association journals helped to identify common interests at the national level. And, perhaps most important, a number of friendships were formed, establishing new bonds where hostility once flourished. These were the benefits of that chance discussion in the remote airspace of rural Russia.

In a study of this magnitude, many people contributed to its successful completion. The staffs of both associations conclusively demonstrated the true value of collaboration. To Edmund J. Gleazer, Jr. and Gene Bottoms (and his predecessor, Lowell Burkett), I owe a debt of gratitude for their enthusiastic support and statesmenlike positions on controversial issues. Richard Wilson of AACJC and Dean Griffin of AVA served as able mentors and liaison persons with the two consituencies involved. I am grateful to members of both Boards of Directors for their expressions of support and endorsement. Albert Riendeau, Jack Wilson, and Richard Carlson of The U.S. Office of Education not only performed admirably in their roles as project monitors but contributed subtantively at various crucial stages in the project. Members of the National Advisory Committee willingly gave of their valuable time not only as

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policy advisors but as participants in site visitations and in the various regional conferences and the national conference.

The author is indebted to Roger Bezdex and Robert Corcoran for their counsel and creative insights into the problems of institutional finance. Dr. Bezdex deserves credit for Chapter 3 of this report. Dr. Corcoran helped organize and chaired many of the discussion groups that were convened during the regional conferences. Others, too numerous to mention by name, served effectively as keynote speakers, discussion leaders, and chairpersons during the six conferences. Staffs of co-sponsoring institutions performed impressively in carrying out many of the essential services that go with the burden of publicizing, scheduling and convening conferences.

Several writers ably executed their assignments as authors of case studies and of the executive summary. William Loch, Jan Nugent, Margot Sanders Eddy and William Mayville deserve full credit for the creative demonstration of their craft. Janet Steiger and Jean Levin of "The Work Place" proved to be invaluable colleagues in translating this bulky first report into a much trimmer, more readable summary document. William Harper of AACJC served as editorial advisor and made many helpful improvements in the wording of this document. Martha Turnage, Ronald Havelock, Eugene Litwak, and Justine Rodriguez provided helpful commentary on various segments of the first report. During the project, Carolyn Carroll and Sandy Drake performed ably in the designing of data collection instruments and in conducting much of the data analysis. Cheryl Cassidy, Jean Thurston, and Carol Cisco typed and proofread the final manuscript. To them and other members of the AACJC support staff, I am greatly indebted.

I am indeed grateful and fortunate to have worked with a staff associate who throughout the study performed admirably in many capacities. Barbara Link proved to be one of those fortuitous choices without whom this undertaking would never have succeeded.

These are the many contributors who helped to ensure that the findings of the study offer potential insights into what constitutes successful interinstitutional cooperative programs.

If there is one person who should be singled out and given credit for much of the pioneering effort of community colleges in vocational education, it is Ken Skaggs. His untimely death not only deprived me but many others of his helpful and generous counsel. It is to him that this report is dedicated.

David S. Bushnell

FOREWORD

To some educators, the connection between vocational education and the purposes of liberal education seems tenuous at best. However, the classic nature of the debate between those who stress the instrumental nature of education for participation in society, and those who believe in liberal learning as an end in itself, with no eye to education's utilitarian value, has shifted. The issue now is what can both vocational and liberal education contribute and how can they best serve people's needs at various age levels.

The emergence of lifelong learning as a feasible concept has forced a reappraisal of the interdependency of business, industry and educational institutions. The problem is how to make institutions more responsive to societal needs at various stages of the living, working, learning cycle. Vocational education and training is being looked upon by the government as its principal strategy for moving non-productive citizens into productive roles. Questions are being raised as to whether entry level job training should concentrate on qualifying a trainee for a job or for career advancement as well. Educational institutions and commercial organizations need to commit themselves to cooperation and communication before such questions can be answered. This means that articulation mechanisms will be under great stress, since a union of the world of education for work and the academic world will require many new cooperative alignments. It will also require systematic infusion of career information at every stage of working and learning.

Of special interest are the methods educational leaders have devised to accommodate and join the programs of different institutions to meet the needs of their clienteles. Even though the U.S. Congress and state legislatures favor cooperative efforts, federal and state regulations have in the past tended to create separate governance structures for postsecondary and secondary programs. In some instances, this has brought about unnecessary program duplication and jurisdicitional disputes. Ths 1976 Vocational Education Amendments with their provisions for joint planning are helping to correct this problem.

There are a number of local institutions which have successfully pioneered ways to articulate their programs with other institutions. This has resulted in a more efficient and effective use of vocational education community resources and a greater breadth of program offerings. Undoubtedly, increased public pressure for access to vocational programs coupled with limited appropriations for education in general, will speed these efforts. When budgets are tight, articulation may well be the best means to significantly cut costs without reducing program quality.

Because the potential benefits of successful articulation are considerable, the American Association of Community and Junior Colleges and the American Vocational Associtiion joined forces in a study, funded by the U.S. Office of Education, that was designed to: (1) identify policies and procedures that help or hinder cooperation; (2) develop recommendations for federal, state, and local jurisdictions to promote cooperative working relationships; (3) disseminate the findings as widely as possible; and (4) establish a mechanism to foster continued cooperation between AAJC and AVA. This report is one of the products of that effort.

A nationwide survey was conducted to pinpoint the policies and administrative practices which facilitate or impede cooperation. A sample of 22 locations throughout the country was drawn up and interviews conducted to document and publicize a series of case studies on successful articulation. Reporting the survey findings and the case studies became the basis for five regional conferences held in 1977-78. Each regional conference generated a set of recommendations for consideration at a national conference convened in February 1978. More than 500 state and local officials participated. We are indebted to them for their insights and involvement.

Gene Bottoms
Executive Director
American Vocational Association

Edmund J. Gleazer, Jr.
President
American Association of Community
and Junior Colleges

INTRODUCTION

Individual initiative and community commitment--both qualities describe the uniquely American personality. We have, as a nation, staunchly supported the concept of pluralism, the idea that a free and democratic country should, within the law, permit people to voluntarily initiate actions in the interest of serving both their own and the needs of others. DeTocqueville recognized this somewhat paradoxical personality characteristic when he observed 150 years ago that "Americans are a peculiar people. If in a local community a citizen becomes aware of a human need which is not being met, he discusses the situation with his neighbors. Suddenly a committee comes into existence...It is like watching a miracle because these citizens perform this act without a single reference to any bureaucracy, or any official agency" (1, p. 61). While we have changed considerably since DeTocqueville's perceptive observations, voluntarism still flourishes at the local level.

There is today, however, a new and somewhat ominous trait that has caught the attention of contemporary observers of the American scene. Meg Greenfield, the Pulitzer Prize-winning editorial writer for the Washington Post, put it succinctly when she commented recently: "It's as if the nation had swallowed a solvent and we were breaking up into our constituent parts--or, to be chemically more consistent about it, coming unglued...everyday the units of protest and concern seem to be subdividing into even smaller and more specialized groupings..." (2). The danger, she observes, is that institutional "self-interest" has come to dominate what was once a broader, over-arching commitment to the larger community. In education, for example, we have moved aggressively over the last couple of decades to provide equal access to at least two years of postsecondary education for all who wish it, but having done so, we are now in danger of losing sight of the larger good being served in favor of narrower, more parochial interests. What was once perceived as the dual strength of the pioneering personality, individual initiative and a sense of community, is in danger of "fragmentation" into institutional self-interest. According to John Gardner, "our society has already devised some fairly effective ways of dealing with the tensions we have been talking about. But... no society will successfully resolve its internal conflicts if its only asset it cleverness in the management of these conflicts. It must have compelling goals that are shared by the conflicting parties; and it must have a sense of movement toward these goals. All conflicting groups must have a vision that lifts their minds and spirits above the tensions of the moment" (3, p. 3).

During the last presidential campaign, the Public Agenda Foundation, a nonprofit, nonpartisan organization established to identify critical public issues and to develop alternative approaches for dealing with these issues, surveyed opinion leaders and found that the dominant concern in America was the trend "toward a psychology of self-interest so all-embracing that no room is left for commitment to national and community interests...That in the pursuit of their organizational goals, the politicians and the businessmen, and the unions and the professions have lost sight of any larger obligation to the public and are indifferent, or worse, to anything that does not benefit--immediately and directly--themselves or their institutions." (4) How to recapture or rekindle the spirit of "community" that permeated the colonial settlements two hundred years ago became the major thrust of the Public Agenda Foundation as it attempted to spark the interest of the principal presidential contenders in the issue during the last campaign. It is this same area of focus that became the concern of a study launched over a year ago to explore the advantages associated with diversification and coordination of postsecondary occupational programs at the local level.

In the summer of 1976, two national associations, AACJC and AVA, representing both institutions and individuals involved in the delivery of post secondary occupational education agreed to jointly sponsor, with the financial assistance of the U. S. Office of Education, a study of administrative policies and practices at local levels which have resulted in exemplary programs of collaboration and cooperation between and among public and private institutions offering postsecondary, nonbacculaureate occupational education. The study was expected to focus its attention on the conduct of a nation-wide survey designed to bring to light successful cooperative ventures in local communities and then to pinpoint, through a more intensive series of case studies, those policies and practices that facilitate cooperation.

A joint study team was formed with its headquarters at the AACJC office in Washington, D. C. In January 1977, a National Advisory Council was appointed, made up of well known practitioners, and research-oriented persons from vocational, community college and adult education backgrounds. The Advisory Council was helpful both in identifying the criteria to be used in soliciting successful cooperative ventures and, later on in the study, critiquing and commenting on the study findings. Members of the Advisory Council and a few consultants were called upon to conduct site visitations in order to collect data from communities where successful collaborative efforts had been identified. The resulting data were then arrayed in such a way as to document the extent of cooperation among the institutions located in these communities. Based upon an initial screening of over 200 institutional nominations, five exemplary programs were then selected and case studies developed on each.

As part of the requirements of the study, five regional workshops were convened in the fall of 1977 for the purpose of presenting to interested persons in the field the results of the study and to get their ideas and suggestions on strategies for implementing more successful voluntary collaboration efforts in their respective localities. The series of workshops were concluded and a national conference convened in February 1978 for the purpose of consolidating the recommendations generated for presentation to a panel of experts representing both Congress and HEW. This report is designed to present both the findings of the series of site visits conducted during the summer of 1978, and to summarize the recommendations and discussions of the five regional conferences and national conference held in the fall and early winter (1977-1978).

The recommendations presented in the final chapter should be looked upon as the product of deliberations of over 500 federal, state and local officials involved in postseconcary occupational education as well as the ruminations of the members of the joint study team and the Advisory Council. Because of the sometimes overlapping and duplicative nature of the recommendations derived from each of the regional conferences and the national conference, the author of this report has taken it upon himself to interpret and cull out those recommendations that did not seem to fall within the action purview of local, state and federal policy makers. Any distortions or oversights which the reader finds are to be laid at the feet of the author and not attributed to the well-motivated and highly involved participants in the proceedings of the various conferences. The ultimate aim of this document is to both communicate the findings of the study and to provide the reader with sufficient information that those wishing to adopt or replicate the models presented may do so with some hope of successfully replicating that which has been achieved elsewhere.

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CHAPTER 1

INTERINSTITUTIONAL COOPERATION

While cooperation among educational institutions in this country is not a unique occurence, its emergence as a recommended administrative strategy for coping with rising costs and expanding demand for services is a recent development involving primarily post-secondary institutions. At the turn of the century, interinstitutional cooperation in this country was limited to a handful of higher educational institutions on the East Coast (28). By 1974, that number had increased to an estimated 10,000 formal linkages among the nation's colleges and universities (12). This growth in interinstitutional cooperation speaks to the intrinsic appeal that group affiliation has to harried or reform-oriented administrators.

The first fully documented consortium* occurred in 1925 when The Claremont Colleges were formed around Pomona College in California, via an arrangement similar to that at Oxford. What began as a small cluster of contiguous colleges which shared a library and other facilities, incorporated in due time the Claremont Graduate School, Scripps College, Claremont Men's College, Harvey Mudd College, and Pitzer College (11).

This effort was followed shortly by the formation in 1929 of a three-college federation in Atlanta. Atlanta University, and Morehouse and Spelman Colleges entered into a close working relationship through the formation of Atlanta University Center.

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*Moore defines a consortium as "an arrangement whereby two or more institutions--at least one of which is an institution of higher education--agree to pursue between, or among them a program for strengthening academic programs, improving administration, or providing for other special needs." (41).

Later three other institutions joined the Center, and, in 1964, a new charter was written linking the six institutions under one administrative control (2).

During the next two decades (1930-1950), little happened in the formation of new voluntary multi-purpose consortia. At the elementary and secondary levels rural school districts were being consolidated into larger districts for reasons of economy and the increased demand for special services (13). High school networks for innovation were being formed in the larger urban areas (40). A few mid-Western and Southern colleges and universities did form consortia (46, pp. 76-80, 99-102). But, by and large, few observers of the educational scene were advocating interinstitutional arrangements which would broaden student access to postsecondary education or bring about the sharing of resources.

That state of affairs changed radically in the early 60's "as colleges and universities began to feel the full brunt of the greatest enrollment rise in the history of American higher education, coupled with economic inflation and the knowledge explosion" (42, p. 6). Johnson, taking note of this new phenomena in the Educational Record, states that cooperation "...is the current compensatory reaction to our long history at overproliferation of autonomous colleges and universities...we have entered a reverse historical phase which seems to embrace interinstitutional coordination and cooperations as a necessary step for completeness..." (25). Logan Wilson opines that the "only real choice remaining for institutional and associational leaders is whether they will get together to exercise major initiative in the reorganization of higher education, or stand aside while others assume this role" (50, p.5).

Not unnoticed during this period of growing pressure for interinstitutional cooperation was the concern with facilitating the transfer of students from junior colleges to senior colleges. Guidelines written by a Joint Committee with representation from the then American Association of Junior Colleges, the Association of American Colleges, and the American Association of Collegiate Registrars and Admissions Officers were composed over a nine-year span of time and ultimately published in 1966 (21). While such pronouncements had little effect upon increasing interinstitutional cooperation, they did set the stage for improved communications between two and four-year institutions. As the authors of the Guidelines observed:

> If the guidelines are to be effective, an attitude of mutual respect and cooperation is very urgently needed. Articulation representing the needs and interests of the individual student and his professors, and coordination, representing the interests of society and the state, should be carried on in an atmosphere of interdependence among institutions having common concerns in higher education. This interdependence will grow stronger as the proportion of students who take their lower division work in two-year colleges increases (21, p. 1).

Five sets of guidelines were identified: (1) Admissions, (2) Evaluation of Transfer Course, (3) Curriculum Planning, (4) Advising, Counseling and Other Student Personnel Services, and (5) Articulation Programs. Each recommendation became, in its own way, a prescription for action by states and local institutions. How well those prescriptions have been implemented with what effects will be examined in greater detail in Chapter 3. It will be sufficient to observe here that the need for facilitating student flow from one institution to another was of concern at the time when students were knocking down doors in order to gain access to some form of postsecondary education. The 60's were definitely not a time of retrenchment.

Publications advocating interinstitutional cooperation appeared with increasing regularity as the 60's ground on. Conferences were held (8, 28, 50), books were written (2, 10, 14, 41), and doctoral dissertations composed on the subject (15, 20, 29). Partially as a result of the growing interest in consortia, Congress in 1965 endorsed interinstitutional cooperation as a way of improving higher education. Title III of the Higher Education Act of 1965 (23) provides support to developing institutions which elect to work on a cooperative basis.* Such funds are designed to assist institutions in need of renewal. Colleges that were thought to be struggling for survival and "isolated from the main currents of academic life" were urged to apply. A substantial number did by forming consortia, many of them small private colleges which wanted to maintain the advantages of small size but sought to enjoy the benefits of economies of scale through mutual cooperation.

Lewis Patterson began an annual survey and listing of voluntary cooperative efforts in 1967 (44). His Consortium Directory published in 1968 listed 31 consortia members. By 1977, the number had risen to 115 involving 1,398 member institutions, an increase of 270 percent since the 1968 edition (46). He estimates, by extrapolation, that "there are more than 10,000 formal linkage systems of all types among the nation's 2,700 plus colleges and universities (45, p. 1). Of these linkages, most could be characterized as "paper consortia" and thus limited to very specific activities. Patterson notes that there has been a trend toward increased emphasis by state agencies and boards on coordination over the period 1970-1975. He concludes that "in several instances the potential threat of external coordination...has been known to be the primary motivating factor for groups to cooperate."

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*Ironically, the Higher Education Act of 1965 restricts funding under Title III to the institutions involved. Consortium staff members serving cooperating institutions are not eligible.

In 1970, over 75 percent of the members listed in the Directory came from the private sector and less than 4 percent from community and junior colleges. By 1975, more than 40 percent of the participants were public institutions and 13 percent were community and junior colleges. Whether this change is the direct result of state pressure to coordinate will be examined more fully in the next chapter.

STUDENT FLOW FROM HIGH SCHOOL TO COLLEGE

While much attention of late has been given over to the study of overall cooperation among public and private postsecondary institutions, some researchers have concentrated their attention on the problem of student flow from one institution to another. Bender (4), Boggs and Lee (7), Lieberman (31) and McKinnerney (33) have studied articulation practices as a way of helping students make the transition from one level of education to another. A number of state commissions, task forces and statewide conferences have been convened for this same reason. Among the most carefully conceived and executed state sponsored studies are New York (48), Hawaii (3), Florida (18), Louisiana (16), Maryland (37), Massachusetts (47), Michigan (38), Minnesota (1, 39), North Carolina (6), and Washington (22, 26).

Kintzer, a prolific contributor to the literature on articulation, cites eight major developments which are impacting on the articulation/transfer issue. Such developments operate not just vertically (secondary to postsecondary, junior college to senior college) but horizontally as well. Among his nominations of significant trends are: 1) increasing control of public education by states; 2) increasing involvement of the federal government; 3) alternative grading procedures; 4) awarding of credit for knowledge and skills gained through work; 5) external degree programs; 6) advanced placement allowances; and 7) application of computer technology to credit transfer and registration (27). Kintzer and others (18a) would agree that the trend toward increased willingness to provide advanced credit by examination, credit for work experience, and growing acceptance of non-punitive testing and individualized instruction have helped to break through some of the articulation barriers of the past.

ARTICULATING VOCATIONAL EDUCATION AT THE SECONDARY AND POSTSECONDARY LEVEL

The recent surge of interest in studies on improving the articulation between high schools and colleges has been only faintly echoed in vocational education. In a survey of the literature conducted by Bender in 1973, only two references turned up (4).

In addition, he identified literally hundreds of dissertations on the topic of articulating academic educational programs, but found only one dissertation which targeted on the topic of articulating occupational education. Not to be undone, Bender conducted his own survey of state directors of community colleges and of vocational education and found that separatism still existed in many states. The principal cause of difficulty was the lack of communication among the agencies involved. He observed that:

> Where vocational and technical education and postsecondary institutions such as the community colleges are under the same state organizational structure, the likelihood is greater that articulation is being fostered from the state through the local and institutional levels. State organizational structure has a significant impact on the articulation on secondary and postsecondary occupational education. Where structures foster separate jurisdiction, special efforts must be made to form lines of communication and interworking relationships if articulation is to be successful. Coordinating councils or even informal regular meetings of the state directors involved have been effective mechanisms to achieve this goal. At least two states reported that a higher authority has been imposed over the state agencies to force coordination because of earlier adverse relationships (4, pp. 27-28).

Bender discovered few written agreements providing for articulation of secondary and postsecondary occupational education. Where they did exist, they tended to be at the state level. Existing agreements were usually administered by a committee composed of representatives from each level of education and type of institution involved. He found that coordinating boards at the state level were more likely to adopt written agreements than were governing-coordinating agencies (4, p. 18).

Seventy-eight percent of those responding to the Bender survey indicated that they felt duplication of occupational programs did exist. The more frequently mentioned areas of duplication were jurisdictional overlaps (service areas), levels and types of programs offered, and types of institutions (4, p. 20). Specific training programs were more frequently mentioned by the directors of vocational education than by the community college directors. Transferability of student credits from secondary occupational programs to the postsecondary level were not perceived to be much of a problem by the chief state school officers and the directors of community colleges but almost 60 percent of the directors of vocational education indicated that they felt it was. Surprisingly, the loci of the problem were not the proprietary institutions, according to state officials. Community colleges and technical institutes "were viewed consistently higher as (a) transfer problem for education," a perspective which included baccalaureate institutions as well (4, p. 23).

Of particular concern to state directors of vocational education was the transfer of student credits from comprehensive high schools to community colleges. In contrast, four-year colleges were ranked relatively low on local transfer problems. State officials viewed the transition from secondary schools to proprietary schools as relatively smooth with proprietary schools being viewed as more willing to offer credit for already achieved knowledge and skills. When asked how they expected to deal with articulation issues, approximately 70 percent of the community college and vocational education directors stated that they perceived conferences or the formation of interinstitutional consortia as the best way of dealing with the problem. When asked to identify any recent innovations that would facilitate articulation, the directors cited credit for work experience and advanced placement as among the more promising practices. Both sets of directors understandably viewed such practices as taking place primarily within the institutions under their jurisdiction.

In a separate but parallel survey conducted about the same time as the Bender survey by the Center for Vocational Education at Ohio State, both groups of state directors were asked to rank order problems that they felt would have to be confronted if career education were to be put into practice at the postsecondary level. State directors for community colleges rated statewide planning and articulation as among their highest order of concern (4). Vocational education directors viewed credit transfer as the key problem. The survey concludes that "government agencies for community colleges having no authority over vocational technical education rank the organizational articulation issue as most important," whereas those agencies responsible for community colleges which fall within the same organizational structure as vocational and technical education, rank it among the lowest in importance (4, p. 27).

In 1973, private junior colleges and public community colleges were surveyed (35) for the purpose of determining the number and nature of existing cooperative arrangements involving institutions at that level. The principal thrust of the study was to ascertain the degree of interinstitutional cooperation among private two-year colleges. Twenty-five percent of the private junior colleges contacted reported 207 programs of interinstitutional cooperation. The study team also undertook to ascertain how state directors of community colleges viewed interinstitutional cooperation among public institutions. Usable information was received from 21 state directors with an additional 5 indicating that they had no ongoing programs or projects. In all, 328 programs involving 321 public two-year colleges and 34 private two-year colleges were reported by the state directors. Of the 328 programs listed as involving bilateral or multilateral cooperative arrangements, approximately 50 percent were concerned with collaboration on academic program offerings.* The reasons given for cooperation in the area of academic programs were that the cooperating institutions could offer more timely programs, tap larger pools of instructional resources as well as personnel than they could independently (35, pp. 41-42).

Curiously, economic advantages were rarely cited as the basis for cooperation. When noted, however, they included economies of scale and better control of student and program costs. Through cooperation, students gained easier access to courses and enjoyed greater opportunities for counseling, tutoring, and work experience.

The disadvantages identified were few in number, the most frequently mentioned being the problem of coordination itself. Lack of personnel for monitoring the coordination programs stood high among the reasons given. The other items cited as disadvantages were the need to standardize materials across institutions and students attending more than one institution.

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*For a fuller description of the categories under which the cooperative programs were classified, see Putting Cooperation to Work: A Survey of How Voluntary Cooperation is Helping Colleges and Universities. New York, New York: Mgn't. Div., Academy for Educational Development, Inc., 1972.

In 1976, the National Advisory Council on Vocational Education (NACVE) conducted its survey of Executive Directors of State Advisory Councils on Vocational Education concerning articulation practices in the States (49a). Of the 56 executive directors contacted, 48 responded (an 86 percent response rate). Forty percent of the states were felt to have successfully implemented planned articulation between secondary and postsecondary institutions. The most frequent occurrence of articulation was in apprenticeable trades programs and in training for occupations requiring licensure.

Some form of statewide coordinating councils existed in about half of the states while 60 percent had local coordinating councils involving representations from secondary and postsecondary vocational education institutions.

When asked to describe effective features or mechanisms encouraging articulation, the executive directors indicated that articulation was likely to occur when:

1. Roles and missions of vocational education institutions were clearly stipulated;
2. States sponsored staff development workshops and other ways of involving institutional representatives from various types and levels of institutions;
3. Local level administrators arranged for joint curriculum planning efforts, shared occupational advisory committees, and explored ways of jointly using local facilities and resources.

Those areas thought to prevent articulation could be grouped into five areas:

1. Separate governance patterns at the state level
2. Lack of planning
3. Prevailing attitudes and philosophies fostering competition and not cooperation
4. Lack of staff for coordination purposes
5. Geography or location of institutions

VOLUNTARY COOPERATION AT THE ELEMENTARY AND SECONDARY LEVELS

There are few references to collaborative ventures among elementary and secondary schools to be found in the literature. Most consortia are of recent origin and are the product of forces external to the educational institutions involved.

The Metropolitan School Study Council was founded by Paul Mort in 1946 (4). As Director of the Institute of Administrative Research, Teacher's College, Columbia University, Mort organized the network as a research, development, and diffusion mechanism designed to facilitate the transfer of new knowledge and practices to participating institutions in the larger metropolitan area of New York City.

Following the passage of the Cooperative Research Act in 1954, and the Vocational Education Act of 1963 with its 10 percent set aside for research, a new emphasis on consortia was initiated.

In 1966, a USOE-sponsored consortium representing 19 geographically distributed secondary schools (9) was organized for the purposes of implementing in a five-year time frame a learner-centered curriculum using educationally-oriented technology, employing suitable organizational patterns, and with an eye to the ultimate cost of acquiring and installing the instructional equipment and materials. The ultimate goal of the Educational System for the Seventies (ES '70) was to enable each of the 19 participating high schools to become demonstration centers for regionally contiguous school districts later on.

Three assumptions undergirded the change strategy employed in ES '70:

1. The entire school district had to commit itself to membership rather than individual schools or institutions within the district. Each of the subsystems making up a district were viewed as part of the whole, thus any changes introduced was approached from a systems-wide perspective.

2. It was agreed that school personnel should be actively involved in the planning and implementation of the research and development projects at each step of the way. However, primary responsibility for the design of curriculum materials and other subsystems innovations would fall outside the school.

3. The probability of accepting materials and procedures developed outside the organization would be enhanced through establishing a reward system for individual adopters within the

system. Recognition and credit was to be offered in proportion to the effort expended.

While much of the funding of the program came from the Bureau of Research of the U.S. Office of Education, funds from other federal agencies were also tapped. In 1969, because of cutbacks in research funds and changes in priorities, much of the commitment to ES '70 at the federal level was drastically curtailed. However, 17 of the 19 school districts involved then decided to contribute a total of $60,000 per year for the hiring and maintenance of an executive secretary for servicing the network. This commitment persisted until 1974 when the consortium was formally dissolved.

The National Association of Secondary School Principal's (NASSP) Model Schools Project was established in 1967 to demonstrate how a network of 55 high schools could change their programs over a period of years from relatively conventional ones to comprehensive innovative programs by individualizing learning, professionalizing teaching, refining curricula, and making more effective use of the "things" of education (49). Guided by Dr. Lloyd Trump, then Associate Secretary of NASSP, the Model Schools' strategy focused on the indepth involvement of teachers and administrators in charting their new roles. It concentrated on developing a thorough understanding of such concepts as individualized scheduling, independent study, small group discussion, differentiated staffing, motivation, etc. through the use of a "gestalt" approach to the implementation of change.

In 1966, Dr. John Flanagan, President American Institute of Research (AIR), founded Project PLAN (Program for Learning in Accordance with Needs), "a structured system within which an effective program of individualized education can be carried out" (17, p. 174). The goals of this major change effort were to focus on the student as the center of the educational program and assist him to formulate his own educational goals to plan a program for achieving them, and to manage both the strategy and tactics for carrying out the achievement of those goals. The teacher was to play an important role in that he or she was to function as a diagnostician, tutor, and special resource to the student. Each student's program was to be developed in terms of both long and short-term performance objectives with student progress being measured at periodical intervals. Between 1966 and 1970, some 40,000 students in grades 1 through 12 participated in the development and evaluation of PLAN. Twelve cooperating school districts were initially involved with the support and assistance of the Westinghouse Learning Corporation. While some of the research was supported through the Office of Education, most of the instructional materials development and packaging were funded through the auspices of AIR and the Westinghouse Learning Corporation.

A fourth consortium, the League of Cooperating Schools, conceived by John Goodlad and his associates (19), was designed to study the process of change in 18 elementary and intermediate schools located in Southern California. The project, launched in 1966 as an experimental effort to test the effectiveness of one or more strategies by which schools could help themselves adapt to their changing environments, was conceived of as a new social system whose norms encouraged the development of new organizational processes involving each school staff. The process was defined as a series of rational, participative decision-making strategies leading to action. It was anchored in the school staffs' ability to make appropriate changes in any aspect to its operation.

The basic financial support for the League came from the Institute for the Development of Educational Activities, Inc. (IDEA) who in turn derived much of its backing from the Kettering Foundation. The UCLA Laboratory School served as the staging ground for the experimental concepts with the Graduate School of Education staff at UCLA serving as resource people. The League offered participants a new kind of relationship with individuals in other school districts and was based on the notion that peer group socialization will bring about effective change in an organization. "While socialization of individuals," Goodlad recognized, "involves changes in behavior, socialization of an organization implies changes in role structure that may endure the passage of persons through it" (19a, p. 156).

How viable were these four consortia and what lessons can we learn from them? None of the four programs survived intact. The League carries on as a part of the IDEA enterprise but with increased attention given to the implementation of the Individually Guided Education (IGE) program developed by Klausmeir and his colleagues at the Wisconsin Research and Development Center (30).

The Westinghouse Learning Corporation was to market the Project Plan products but phased out the program in 1975. ES '70 and the Model Schools Network no longer exist. While each consortium looked to outside leadership for their initial organization and financial support, only one consortium persisted for a period without that support. Each network was viewed by its chief proponent as a way of testing out innovative concepts through involvement and sensitizing of potential users to the possible benefits to be derived. A commitment to continued membership in each of the consortia was not as strongly held as were those we reviewed at the postsecondary level.

OTHER FORMS OF COOPERATIVE ARRANGEMENTS: STATE COORDINATING COUNCILS AND REGIONALISM

The consortia and networks described so far can all be arrayed under the heading "voluntary." Other types of arrangements could be specified on the basis of geography, control, purpose, etc. Before closing this review and analysis of arrangements, brief mention should be made of two forms of cooperative effort that could properly be labeled "statutory" in nature. While these concepts will be developed at greater length in the next chapter, a brief description of their form and function is in order here. Voluntary and statutory cooperative arrangements do share common features, and more importantly, can be mutually reinforcing.

Statewide coordinating systems for higher education, while to some extent foreshadowed by the development of master plans for public higher education during the late fifties and sixties (5), received considerable impetus with the passage of the Higher

Education Amendments of 1972. In accordance with Section 1202, many states have developed postsecondary coordinating commissions that for the first time have brought representatives of postsecondary vocational schools, technical institutes, community colleges, private non-profit and proprietary vocational schools as well as the more conventional institutions of higher education to the same table for the purpose of information exchange and joint planning (32). The Amendments establish the intent of Congress to expand the States' awareness of the need to coordinate all of the postsecondary education enterprises, not just higher education.

In a speech before a conference on statewide management information systems, Martorana notes that there has been "a shift from an assumption stressing clarification of institutional purposes and separation of institutional mission to one which stresses multiple delivery systems and 'options'" (33, p. 5). Clarifying institutional roles and goals through state master plans has yielded to a growing interest in maximizing the effective use of a state's resources in serving all postsecondary education needs. Whether this shift in emphasis reflects a growing desire to maintain or expand student access to postsecondary education or control costs (or both) will be analyzed more fully in the next chapter. What is important to observe here is that with the growing emphasis on statewide coordination comes the need to know and better understand how voluntary cooperation and statutory coordination programs can be helped to mutually reinforce one another. Franklin Patterson (42, p. 103) boldly suggests that the leadership of the consortium movement has a genuine opportunity to guide by example federal and state actions.

The emergence of regionalism as a new postsecondary education coordination concept can be attributed to two separate but parallel trends. The shift of attention from individual institutions to a state-wide "systems" perspective on postsecondary education represents one development. The other is the increased interest in voluntary interinstitutional cooperation. The primary reason for regionalism, according to Martorana and McGuire (35) is the leadership posture assumed by state-level boards or commissions who have been given official responsibility for the overall survellience of statewide postsecondary education effort. Four patterns of regionalism* are identified. The first, labelled "broad regional needs," reflects those plans which incorporate several geographical regions established throughout a given state. The second, "specific program or section needs," reflects a pattern dealing with a single academic program or single subsection of postsecondary education. The third, "interstate arrangements," describes a pattern involving either the entire state or a subsection of the state with either the entire state or subsections of other states. The fourth pattern, "specific area needs," is designed to meet the postsecondary educational needs of a particular geographic subsection of a state. The underlying purpose of most of these plans can be attributed to a better utilization of resources within the region's identified.

Sources of authority for the various regionalism efforts described by Martorana and McGuire were administrative authority (possessed by a unit of the state government), legislative authority (expressed in statutes), and authority held by established postsecondary educational institutions. The most common authority by far was the first, that held by administrative units in state governments. Only four states and four plans within those states derived their regionalized plans from the authority of the postsecondary institutions involved.

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*Defined as "That view of a geographic subsection of a state (or of several adjoining states) that considers all (or a number) of the postsecondary educational components within the region collectively and seeks to establish a coordinated relationship..." (35, p. 3).

Funding sources vary widely from program to program. While this was not the principal concern of the Martorana and McGuire study, they found that nine of the 46 regionalization patterns did report that states and individual institutions were the primary sources. Only three states reported federal support for regionalization programs, two of these were in the form of the Fund for the Improvement of Postsecondary Education (FIPSE) grants (35, p. 56). Of the plans receiving private financial support, three came from sources which were identified as traditionally supportive of innovative educational programs. One of these, the state of Texas regionalization Project TAGER (Texas Association for Graduate Education and Research in North Texas) received a major gift from Texas Instruments but was also deriving support from annual fees charged to member institutions and from the state. A Ford Foundation grant underwrote the curriculum evaluation and planning dimension of TAGER and mention is made of a considerable "in kind" investment by each of the member institutions (36, pp. 56-59).

Martorana and McGuire conclude their overall evaluation of the regionalization movement by stating that "Regionalism may be the first manifestation of awareness that the no man's land (between local and state officials) exists; and regionalization may be the way the now unclaimed domain of service will be entered without having a battle among the several...education interests who have a claim to the right to serve it." (36, 64).

SUMMARY AND OBSERVATIONS

The rise in voluntary and statutory cooperative arrangements particularly among postsecondary institutions over the past two decades has been pictured as a salutary phenomena. Among the major economic trends and social pressures which helped bring about this movement are:

1. The initial rise in enrollment demands and the shortage of qualified faculty.

2. The desire to improve the quality of educational programs and yet keep institutional operating costs at a manageable level.

3. The continuing demand for expanded educational opportunities without expanding facilities.

4. Fuller utilization of the community's learning resources.

5. The promotion of diversity among institutions as well as the strengthening of developing institutions.

6. The improvement of an institution's ability to attract external funding.

7. To promote the reduction of interinstitutional competition and the promotion of a greater voice in state and national planning for postsecondary education.

8. The desire to reduce the threats of invasion of one's territory by a potential competitor (28, p. 20).

The explosive growth in numbers of the community colleges and area vocational schools during the decade of the sixties contributed to the growing need for statewide coordination of postsecondary programs and services. The development of guidelines for facilitating student transfers, the inclusion in the Higher Education Act of 1965 of provisions for the support of developing institutions, especially those that choose to band together into consortia, and the rise in the numbers of state coordinating councils, all such events offer evidence of Congress' and the public's concern with providing equal access to postsecondary education.

Articulation has been viewed as just one of a number of manifestations of interinstitutional cooperation. Kintzer offered a number of reasons why articulation priorities should be viewed as of increasing importance to postsecondary institutions: the expanded use of computer technology for credit transfer and registration, the awarding of credit for knowledge and skills gained, the economies of scale and better control of student and program cost. Among the disadvantages noted were the lack of personnel to monitor and coordinate programs and the need to standardize instructional materials across institutions.

Among the cooperative efforts reported at the secondary level, most were found to involve interstate arrangements for the purpose of testing out the feasibility and the desirability of new innovative instructional procedures and programs. None of the networks of schools described evolved from leadership within the institutions participating in the networks and most were dependent upon some form of external funding.

Not only were voluntary interinstitutional cooperative arrangements assessed, but the reason underlying statutory arrangements among and within states were commented on as well. The upsurge of state 1202 Commissions and other postsecondary coordinating commissions partially in response to the Education Amendments of 1972, brought representatives of all postsecondary institutions together, often for the first time, for the purpose of information exchanged and joint planning (32). In commenting on this development, Martorana noted a shift in stress at the state level from the clarification of institutional purposes and roles to an emphasis on system-wide delivery capability and the maximizing of student options.

The emergence of regionalism as a new postsecondary education coordination concept reflected this shift in perspective. Among the various regionalized plans cited only one has succeeded in attracting federal, state and private financial support. The regionalization movement in postsecondary education, while a fledgling one, represents a way of filling the void between locally administered programs and state administered programs.

Interinstitutional cooperation and articulation are but two of a number of possible arrangements that enable institutions to respond to pressures for change. As such pressures continue to grow, more and more attention will be given to linking up in a mutually reinforcing manner the elements involved in building and maintaining voluntary consortia with the arrangements specified under statutory coordination requirements at the regional or state level.

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CHAPTER 2

PRESSURES FOR CHANGE

Those responsible for policy decisions regarding education in this country during the past ten years have had to grapple with a different set of demands than those experienced during the previous two decades. The concern with expanding facilities and offering new programs has been replaced by demands for greater efficiencies in the use of resources and more flexibility in response to the varying needs of both the traditional and nontraditional student. Add to these the demands of a federal and a state government bent upon insuring equal access to educational opportunity and one can sense the pressures with which educational administrators must cope.

Not only have recent Supreme Court rulings helped shape local policies regarding admissions and the way in which financial support has been allocated to students and institutions, but the impact of legislation must also be judged. Since the late fifties, the major force for change at all levels of education may well have been the result of new federal laws and their related regulations. What the nature and thrust of those laws have been and their impact on state and local authorities with regard to interinstitutional coordination will be the primary concern of this chapter, with particular attention to vocational and higher education legislation. Implications of the 1973 enacted Comprehensive Employment and Training Act (CETA) in terms of local coordination will also be traced. These three areas of legislative activity--higher education, vocational education, and manpower training--and their effects upon local postsecondary educational institutions will be charted and their implications for strengthening interinstitutional cooperation identified.

A portion of the chapter will also be devoted to a discussion of the response that states have made to demands upon them. In order to put into perspective state level requirements, one must understand a little of the history of each state. How to present that history in a relevant and yet concise manner poses a dilemma. A great deal is happening particularly with regard to the establishment of coordinating boards and advisory committees. Legislative initiatives are legion. To bring these developments within reasonable bounds, the many initiatives have been presented in summary form by means of a structure/functional matrix conveniently provided by an ongoing series of reports by the Association for Institutional Research (5) and the American Association of Community and Junior Colleges (4).

FEDERAL ROLE IN VOCATIONAL EDUCATION

Sixty years of experience with vocational education have helped to sharpen our understanding of the role of federal legislation in effecting educational innovation and change. No less than 14 major Acts of Congress have guided the administration of vocational education at the state and local level. At each juncture, its evolution was justified on the basis of national (usually economic) needs. The Smith-Hughes Act in 1917, for example, was in response to meeting the manpower needs of American Agriculture and industry. The passage of that landmark legislation, however, was not without controversy.

The role of education in preparing youth for employment had been a subject of heated debate since the turn of the century. John Dewey and his supporters argued that the type of education needed to ensure an individual's economic security and protect him against the dehumanizing effects of technology was a well-rounded liberal education, one which encompassed the practical as well as the abstract (20). The "social efficiency" philosophers represented by David Snedden and Charles Prosser proposed specific skill training as an alternative to purely academic studies. Prosser argued that the goals of increased productivity and material wealth would serve both the individual as well as societal needs. "Increasing production, employment, and income (would) become the measure of a community's success, and personal riches the mark of individual achievement" (12, p. 12). The social efficiency school's concept of vocationalism was designed to meet the demands of a rapidly growing labor market with its heavy dependence on technology.

Dewey and other advocates of the progressive education movement viewed the temptation to copy the German technocratic vocational system with suspicion and saw it as a way of channeling students into unrewarding and narrow occupations. The challenge to our society, as Dewey saw it, was to combine our talent for technological advancement with our humanistic orientation. "A new culture expressing the possibilities eminent in a machine and in human development will release whatever is distinctive and potentially creative in individuals, and individuals thus freed will be the constant makers of a continuously new society" (11, pp. 132-133).

Both movements, however, advocate the linking of learning experiences in the school with real world events, not only because such knowledge gave meaning to abstract concepts but because the array of particular experiences would enable students to reason from the particular to the general and thus enhance the individual's understanding and sense of control over his own environment. Dewey differentiated between occupational training and preparation for a vocation by recognizing vocations as an all-involving, self-fulfilling role which represented the individual's desire, among other things, for social service. Education, he argued, offered the best means of revealing both potentials, provided vocational education did not limit itself to narrow skill development. Accordingly, he fought state and federal legislation that advocated separate systems of vocational schools alongside the general common school.

The National Association of Manufacturers, the American Federation of Labor and liberal urban reform forces formed a coalition (together with farm organizations) in 1908 and labeled it the National Society for the Promotion of Industrial Education (20). Various committees formed by the Society openly debated the problem of vocational education. Finally a concensus was reached calling for national support. A commission on national aid to vocational education was appointed by the President in 1914, and it in turn was followed by the introduction of a bill by Senator Hoke Smith from Georgia to implement the recommendations of the commission. Early in 1916, Representative Dudley Hughes (also of Georgia) introduced a similar bill in the House. Both the House and the Senate passed the Smith-Hughes Act in 1917 which provided $7.2 million annually to states for the promotion of vocational education in agriculture, trade and industrial education and home economics. The Act also provided for the administration of vocational education programs by a federal board responsible directly to Congress made up of the Secretary of Commerce, the Secretary of Labor, the Commissioner of Education, and three citizens representing the interest of labor, agriculture and manufacturing and commerce. The Act required that each state submit to the federal board a plan outlining the method by which it proposed to conduct its vocational education activities. Interestingly enough, the Act provided support for programs of vocational education in agriculture, trade and industry, and in home economics for both in and out-of school youth and adults. Home economics included both organized class work and supervised projects in the individual's home.

During the three decades which followed the passage of the Smith-Hughes Act a total of fifty-three bills were introduced in Congress as supplementary legislative proposals relating to vocational education. Among the more significant actions taken over this time period were the extension of vocational services to Hawaii and Puerto Rico, added appropriations for expanding and extending agricultural and home economics programs, the inclusion of distributive or business education as a needed area of vocational education, and the disposal of surplus was materials for use in vocational training.

Perhaps the most significant modification to the then existing legislation was the provision in the spring of 1940 that a budget be submitted by the Office of Education for a program of vocational training for was production workers. Between 1940 and 1946 a number of Acts were passed providing expanded funding for vocational training in support of the war effort.

In 1946, the George-Barden Act was passed. In a "statement of policies" bulletin issued by the U. S. Office of Education, it stated that "the chief characteristic of the George-Baden Act, as contrasted with previous vocational education legislation is flexibility. Some of the specific limitation on the use of funds were omitted from this Act and provisions were included to allow for new phases of work" (18). This meant that certain job clusters which had previously enjoyed a line item authorization of funds were no longer given separate authorization. State directors were expected to use their own discretion in determining what funds should be used to support teacher training, administration and supervision, or rental of equipment and supplies. It made it possible for persons engaged in vocational education to spend less than 50 percent of their time in shop work in their pursuit of vocational skills. Earlier acts had provided that vocational instruction should extend over not less than nine months per year and not less than thirty hours per week. The Act also authorized a fourfold appropriation increase to $28.8 million.

Twelve years following the passage of the George-Barden Act, the National Defense Education Act of 1958 was enacted providing assistance to the states for the improvement of area vocational education programs and for technical training (for youth, adults and older persons) at the postsecondary level. This Act authorized an additional $15 million for area vocational programs to be spent in each of the fiscal years 1959-1963. These funds could be used not only for the salaries of state and local school personnel but also for the training and work experience programs for out-of-school youths, the transportation of students, and the planning and development of area vocational education programs. Added to the growing interest in technician level training as a result of Russia's perceived superiority in its space program, a need for training in the health occupations was also recognized. Under Title VIII of NDEA, support for new occupational programs in such fields as data processing, electronics, and drafting design was provided at the postsecondary level. One- and a-half-million students were helped to pursue such studies under NDEA's Title II National Student Loan Program.

Shortages of trained personnel in other critical areas together with structural unemployment brought about by technological change led to the passage of the Manpower Development and Training Act (MDTA) in the early sixties.

In 1961, President Kennedy appointed a Panel of Consultants on Vocational Education who were instructed to explore the possibility of broadening the occupational scope and increasing the enrollment of high school age youth and post-high school youth and adults in vocational education. It is worth noting that the twenty-five panel members appointed included fifteen educators, three businessmen, three labor leaders, three federal government representatives, and one Executive Director of a professional association (11a).

The issues confronting all of education did not go unnoticed in the report. The panelists were clearly sensitive to the important role that vocational education could and should play in providing the disadvantaged and the school dropout with more relevant and rewarding educational programs. As a mechanism for ensuring that future deliberations on vocational education be responsive to national needs, the panel recommended that a National Advisory Council be established to weigh and consider policy issues that would arise in the future. This recommendation proved to be one of the more important ingredients of the landmark legislation passed and signed into law by President Johnson on December 18, 1963.

The passage of this significant legislative initiative signalled a shift in Congressional focus. It authorized states to develop new vocational education programs in response to anticipated employment opportunities and was designed to serve all who could benefit from training or retraining (at the sub-baccalaureate level) whether enrolled in school or not. It established a permanent program for vocational education based on a formula for allocating the annual appropriations among the states which reflected the number of persons in various age groups needing vocational education and the per capita income of the state. In addition, part of the annual allotment was reserved for use at the discretion of the Commissioner of Education for research, development or pilot programs, especially those designed to help meet the special needs of youth with academic and socio-economic handicaps.

The '63 Act provided that at least one-third of the basic allotment to each state was to be used in serving those who had completed or left high school and were available for full-time study in the preparation for entering the labor market. (In 1968, this provision was midified and reduced to 25 percent of the basic allotment.) It was also required that each spend 3 percent of its allotment for such ancillary services as in-service teacher training, program evaluation, state administration and leadership, and instructional materials development and testing.

In one of its more significant additions to past enactments, Congress required that each state designate a State Board of Education as the sole supervisory and administering agent responsible for the allocation of federally authorized funds. They required that the Board be made up of persons familiar with the educational and vocational needs of management and labor, as well as representatives of educational institutions. If existing boards were not familiar with labor-management needs, then a State Advisory Council was to be created to include such persons in order to assist the State Board in carrying out its plan. To receive its federal allotment, states had to submit a plan to the Commissioner of Education for approval. Included in the plan were to be provisoes for meeting the manpower needs and employment opportunities in the state; for minimum qualifications for teachers, supervisors, and directors; and for cooperative arrangements between the state's public employment offices and the State Board.

The Act also required that states match on a dollar-for-dollar basis the federal expenditure. Beginning in 1964, the federal monies authorized for appropriations was to have almost quadrupled by 1967, from $50 to $225 million. In actuality, total expenditures went from $1/3 billion to over $1 billion by 1967. In addition the federal government was authorized to bear one-half the cost of constructing area vocational school facilities (defined as those facilities which provide vocational courses in no less than five different occupational fields to persons available for full-time study before or after the completion of high school, in preparation for entry into the labor market).

In summary, the Smith-Hughes Act, the George-Barden Act and the Vocational Education Act of 1963 taken together required that 23 purposes be served and a separate accounting for each be maintained. In addition, there were four percentage expenditure requirements under the six purposes in Section 4(a) of the '63 Act, each of which required a separate state matching by purpose. With the introduction of state matching requirements and the further bureaucratizing of an already complicated set of federal regulations, compliance was looked upon more as a matter of expediency than systematic and rigorous planning. Most states, however, were willing to put up with the red tape required because the dollars allocated represented needed funds to offset the burgeoning costs of a rapidly rising student enrollment. Outright revolt was postponed in favor of buckling down to get the job done.

Despite the provisions of the vocational education legislation in 1963, and the Elementary and Secondary Education Act of 1965, the National Advisory Council on Vocational Education found that the expanded goals of vocational education as visualized in the

1963 Act were not being achieved (1). The Council met in an atmosphere of urgency following the social uprisings in Watts, Cleveland, Trenton, etc. "The impact of the social disturbances in these and other cities and the relationship of these disturbances to social and economic conditions provided new and deep social concern about the role of vocational training and education in ameliorating these conditions. The relationship to vocational education of such problems as unemployment, disadvantaged groups, ethnic groups, divergent cultural backgrounds, poverty, deficient housing,...were discussed frequently by the Council" (3).

Out of the deliberations of the Council emerged several dramatic changes that were to impact on vocational education for years to come. Virtually, for the first time, hundreds of professional organizations became involved in the 1968 deliberations with the funding of conferences, reports, and hearings through the use of federal funds earmarked for that purpose.*

In 1968, further amendments were enacted which gave the states greater flexibility in the overall statewide matching of the federal appropriation in that varying proportions of federal funds could be used in matching state and local funds. The principle of greater access to vocational programs, an important theme in the 1963 Act, was strongly endorsed and extended in the Vocational

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*See, for example, The Massachusetts Institute of Technology. Final Report of the Summer Study on Occupational, Vocational, and Technical Education. Cambridge Mass.: MIT, Contract No. OE-5-85-135, 1965. Also Arnold Kotz, Planning and Programming of Vocational Technical Education: A Summary of the Reconnaissance Surveys. Menlo Park, Calif." Stanford Research Institute, 1967.

Education Amendments of 1968 (PL 90-576). The amendments required that for fiscal year '70 and for each subsequent fiscal year, 25 percent of the proportion equal to the state's allotment (in excess of its base allotment) was to be used for programs for the disadvantaged and that an additional 25 percent of the allotment should be used for persons who had completed or left high school and who were available for study in preparation for entering the labor market.

Ten percent of each state's allotment was required to be used for persons with physical or mental handicaps and no less than 15 percent of the total allotment was to be used for programs for the disadvantaged or for those persons who had completed or left high school (with some flexibility built in for the Commissioner of Education to determine whether the requirement was feasible or not).

The 1968 Amendments offered assistance to the states and local education agencies to develop curriculum for new and changing occupations and to disseminate information relating to those curriculum materials. The National Advisory Council and State Advisory Councils were required to advise both Congress and the state boards of vocational education as well as prepare annual evaluations of their services and activities.

Following the passage of the 1968 Amendments, further amendments came fast and heavy. Among the more significant ones were the introduction of an authority for residential facilities, provisions for bilingual vocational training, and a greatly expanded authorization of grants to states to assist them in conducting vocational education programs for persons of all ages. Federal initiatives in vocational education during this period (1969-1975) accomplished several purposes--the scope of vocational education was broadened to include prevocational exploration as well as adult, continuing education. The concept of a career ladder was adopted and greater stress was put upon expanding the role of postsecondary education in vocational education. Partly as a result of this evolutionary progress, the concept of career education took form and emerged under separate sponsorship (13).

The stage was now set for the passage of the Vocational Education Amendments of 1976, the strongest usurption yet of state and local authority. While states and local school systems were permitted greater latitude in the use of federal funds (categorically funded sections of the 1968 Amendment were consolidated into block grants to states), much more stringent requirements regarding the planning and reporting process were imposed. Reciprocal or collaborative relationships with all interest groups were called for in the formulation of the first one-year plans. A data gathering and reporting mechanism was mandated through the creation of a National Vocational Education Data System (VEDS). In addition, 20 percent of the funds allocated to the states must be used for program improvement and supportive services such as counseling and guidance, pre- and in-service personnel development, grants to overcome sex bias, etc.

A major thrust of the '76 Act was to improve the coordination between vocational education and the Comprehensive Education and Training Act (CETA). Title II of PL 94-482 stipulated that states were expected to improve their planning in the use of all resources available to them for vocational education and manpower training by involving a wide range of agencies and individuals concerned with education training iwthin the state, and the development of the vocational education plans. Under the CETA bill, the State's Manpower Services Council must be actively involved in the development of the vocational education plans. In addition, the State Board of Vocational Education must meet four times during the year in preparation of its five-year plan and three times each year in the preparing of the annual plan and accountability report.

The law also requires that there be cross-representation of vocational education on Manpower Advisory Councils. The National Commissioner of Manpower Policy must sit on the National Advisory Council and at the state level a member of the State Manpower Services Council must sit on the State Advisory Council on Vocational Education and vice versa.

In promoting further coordination of vocational education and manpower training efforts at the local level, the CETA prime sponsor is required to provide assurance of collaboration in his annual application for funding by demonstrating that their plans were developed in consultation with representatives of the educational and training resources available in the area served.

Among the more innovative provisions of the 1976 Amendments is the requirement that a National Occupational Information Coordinating Committee (NOICC) be set up. Its composition was to be made up of representatives of the Commissioner of Education, the Chief

Administrator of the National Center for Educational Statistics, the Commissioner of Labor Statistics and the Assistant Secretary of Labor for Employment and Training. Up to $5 million was to be transferred from USOE to develop and implement an Occupational Information System which would help meet the information needs of vocational planners at the national, state and local level. Each state was expected to establish a State Occupational Information Coordinating Committee (SOICC) which has on it representatives of the State Board of Vocational Education, the State Employment Security Agency, the State Manpower Services Council, and the agencies administering the vocational rehabilitation program. Thus, the '76 Amendments spell out in great detail and mandate that coordination take place between vocational education and the manpower training programs.

An additional requirement of the '76 Act is that state boards of vocational education must "take positive steps to eliminate sex bias and sex stereotyping from all vocational programs." Among the recommended actions are that the five-year and annual state plan specify in detail how the state intends to insure equal access to both men and women to programs as well as encourage the enrollment of women in non-traditional courses. The expectation that the state will hire an appropriate administrator and evaluate program effectiveness is also built into this requirement.

In summary, the impact of the Vocational Education Act of 1976 and previous legislation can best be described as an "inverse cornucopia" of funds.*

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*For a charting of expenditures and enrollments in vocational education, see Figures 3 and 4, Appendix A.

What started out in 1963 as a broadening and loosening of requirements at the federal level ends up in 1976 narrowly circumscribed by rules and regulations which tie the hands of decision makers at the state and local levels. It consolidates all vocational education and categorical grants, (except consumer and homemaking education and special programs for the disadvantaged) into a single block grant for the states. Eighty percent of the block grant is a "basic grant" and 20 percent is for "program improvement and supportive services." The Act overhauls the method of state planning and requires the inclusion of a wider range of groups in the planning process. It also stipulates specific accountability measures and incorporates the theme of eliminating sex discrimination, sex bias, and sex sterotyping in vocational education.

Grants-in-aid to states, long the tradition in this arena of federal support, has continued over the last 60 years as the basic funding mechanism. Rather than providing matching funds for programs in particular categories of occupations, however, the '63 Act and subsequent Amendments broadened the scope of support to embrace all relevant occupations and focused the federal monies on specific target populations, e.g., secondary and postsecondary students, the handicapped, and the disadvantaged. The rationale for federal funding remained the same as that expressed in 1917, namely, that national need warranted federal intervention where support at the local and state level might be insufficient. Closely allied with this concept was the recognition that some regions might suffer from an inadequate tax base for the support of education and would require federal dollars to bring vocational education programs up to minimal standards. Again from the perspective of national needs, Congress felt justified in specifying which occupations should be served in the best interest of the country as a whole but later adopted the attitude that states and substate regions were best qualified to make such judgements.

While Congress had already set sufficient precedent in exploiting other strategies of aid to education (block grants, categorical aid, matching grants), it chose in 1963 to combine all these strategies into one legislative program. The result, aptly described by Davie, led to a "specification of separate grants-in-aid, a maintenance of effort requirement and...the distribution of federal funds by a state to local educational agencies" (10, p. 282).

Congress was not satisfied with the pattern of state and local spending on vocational education and sought to insure compliance with its priorities by requiring in the '63 Act that each state prepare a plan for allocating federal funds and that that plan be reviewed and approved by the Office of Education before such funds could be allocated. It made no attempt, however, to control the allocation of state grant monies. This led to continuing support for the old traditional occupational categories by states and less emphasis on national priorities. Given the option, for example, to use their own monies in the construction of either area vocational schools or community colleges, state directors of vocational education overwhelmingly supported the construction of area vocational schools because they would serve both high school and postsecondary students. This federal concern was expressed in the '68 Amendments by Congress imposing guidelines and set-aside requirements on the basic grant. Beyond these stipulations, however, states were still free to allocate state monies by means of either grants or formulas (the former seemingly the preferred strategy, as it puts greater discretionary control in the hands of the state). At the heart of the issue, of course, was the issue of equity. Without prodding, in Congress's view, states were apt to continue obsolete practices which not only failed to serve national needs but often violated the hard-won national commitment to equal educational opportunity.

In addition to the categorical grants-in-aid, set-asides, and guidelines for state funding programs, the '68 Amendments authorized state and national advisory councils and state departments of education to recruit staffs and to engage in or to enlarge their planning efforts. How well these plans ensured the responsiveness of states to changing needs can be judged by the observation in the 1975 Government Accounting Office report: "State plans are prepared only for compliance with OE requirements in order to receive federal funding. States do not use these plans for operational purposes and they do not measure progress against what is described in the plan" (8). Suffice it to say, not all of the joint planning in the names of vocational education found its way into operating budgets and administrative programs of the states.

MANPOWER TRAINING LEGISLATION

While many of the current features of the federal manpower programs can be linked as far back as the 1930's and earlier, present emphasis really had its origin in the passage of The Area Redevelopment Act of 1961 and the Manpower Development and Training Act of 1962. Both pieces of legislation focussed on the structural unemployment problems of the disadvantaged and the poor. The climate was right for such programs as employment was expanding and the economy was on the upswing. By providing work experience, basic education, and training, it was hoped that the ranks of the hard core unemployed could be reduced.

Beginning with the early 1970's, a new strategy emerged reflecting the conditions of the times. Rising unemployment levels led to the passage of the Emergency Employment Act of 1971 which basically subsidized states to provide public service jobs over a two-year period. All told, by 1972, there were more than 17 categorized manpower programs in operation, all operating in the same communities, each with its own regulations, funding source and legislative authorization.

It wasn't until the end of 1973 that a manpower reform bill could be passed which essentially transferred the control of manpower programs into the hands of state and local officials. The Comprehensive Employment and Training Act of 1973 (CETA) with its seven titles establised a program of financial assistance to state and local governments (prime sponsors); provided funds for hiring unemployed persons in public service jobs; authorized direct federal supervision of manpower programs for minorities and special groups; continued the Job Corps; and established a National Manpower Commission. Although CETA was viewed as one of the early revenue-sharing programs of the Nixon administration, subsequent amendments have reintroduced several categorical aid features with 58 percent of the funds earmarked for special use.

More recently, reflecting the mounting concern over the unemployment of young people, President Carter signed the Youth Employment and Demonstration Projects Act (YEDPA) in August of 1977. YEDPA, funded at $1.5 billion, is expected to create more than 250,000 jobs or training opportunities for youth. There are four main provisions of YEDPA.

Under the Young Adult Conservation Corps (YACC), the Department of Labor, with the help of the Employment Service and prime sponsors, will be responsible for choosing the participants for the corps. YACC is open to unemployed youth age 16-23 who are experiencing difficulty in finding jobs and who are interested in conservation.

The Youth Employment and Training Program is perhaps the most significant provision for two-year colleges and area vocational schools. Under this part, 22 percent of the funds must be spent on programs for unemployed or underemployed youth (16-21) who are in school or will return full-time, including high school, vocational schools, or two-year colleges. Interested postsecondary institutions must work through prime sponsors and local education agencies.

The Youth Community Conservation and Improvement Projects are selected by prime sponsors and designed for unemployed 16-19 year olds who work to combine job training, work-experience and relevant school programs. An emphasis is placed on helping the youth work toward a high school diploma or postsecondary degree while giving him/her a chance to develop work experience and job skills.

The Youth Incentive Entitlement Pilot Projects provision will provide money for experimental projects designed to give low-income young people up to 20 hours a week employment during the school year and 40 hours a week during summer vacations while they earn their high school diploma or equivalency. The pilot work projects can be administered by community-based organizations, local school districts, institutions of higher learning, labor unions, other non-profit organizations, or units of local government.

HIGHER EDUCATION LEGISLATION

Turning our attention to the realm of higher education, federal support for this sector has, until recently, been of a lower magnitude than that enjoyed by vocational education. Its history, however, dates back to the Northwest Land Grant Ordinance of 1787 which established grants of land to the states to assist in setting up seminaries for learning. The first really major effort to expand higher educational opportunities came with the passage of the Morrill Act of 1862 which provided land grants to all states. The proceeds from the sale of the land grants were to be used to establish an endowment for the purpose of funding one college in each state in which the

> ...leading object shall be, without excluding other scientific or classical studies, to teach such branches of learning as are related to agriculture and the mechanical arts, in such manner as the legislatures of the state and territories may respectively prescribe, in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions of live (2, p. 27).

Historians have pointed out that the Morrill Act was passed at a time when agrarian associations and educational reformers had successfully mobilized into interest groups, and, by chance, did so when their potential Congressional opponents from the South happened to be engaged in secession from the Union.

Between 1862 and 1944, few significant pieces of federal legislation were passed which impacted directly on higher education. The Federal Emergency Relief Administration, while not having education as the primary focus, did institute during the depression years the College Student Work Program which provided approximately 620,000 college students with part-time jobs, thus enabling them to remain in college.

It wasn't until World War II, however, that a significant shift in policies regarding higher education took place. During the war, research contracts with universities became a major strategy for solving war related problems (17). The importance of this relationship took on ever increasing significance until the student protests of the mid-sixties at which time the federal government found it necessary to look elsewhere for most of its defense related research.

Also, during the war years, most college and universities benefited from the Army Specialized Training Program (ASTP) and the Navy's V-12 Program which made it possible for military personnel to study and drill in military tactics on campuses. Over $300 million was provided to higher educational institutions in support of that program, a third of which represented a subsidy for tuition fees (2).

Anticipating that the war would end soon and that millions of returning veterans would be hard pressed to find jobs in the labor market, Congress passed the Serviceman's Readjustment Act of 1977 (the GI Bill) not only to compensate for educational opportunities foregone because of the war but also as a way of coping with the anticipated massive economic adjustment problem resulting from the influx of returning veterans (19). Largely as a direct result of the GI Bill, enrollments in colleges and universities doubled in size between 1940 and 1950.

It wasn't until 1957 that additional legislation was considered to offset the supposed competitive advantage that the Soviets evidenced through their launching of the satellite Sputnik. Between 1957 and 1959, approximately 1,500 bills were introduced into Congress which would affect education. Eighty of these bills became law.

Perhaps the most significant single piece of legislation was the National Defense Education Act mentioned earlier. Title I of that Act declared a new national goal: "No student of ability will be denied an opportunity for higher education because of financial need" (12, p. 547). The seeds of this egalitarian concept had been sowed during the late forties when the Truman Commission on Higher Education (16) argued the need for expanded educational opportunities beyond high school. Members of the Commission made much of the fact that 49% of those conscripted for military duty had the capability to complete 14 or more years of education. The Commission concluded that "the time has come to make education through the fourteenth grade available in the same way that high school is now available." Opening the doors to postsecondary education for all who wish to gain access regardless of race, religion or wealth was a dramatic departure from the meritocratic concept of the past. Since 1958, Congress and the states have sought to put a college education within commuting distance of every potential enrollee (6).

Federal legislation and its policy of unrestrained growth of higher educational institutions and programs flowed at an accelerating pace.* The improvement of collegiate physical plants, curriculum upgrading, the expansion of federally supported research activities all reflected this commitment. Passage of the Higher Education Act of 1965 offered an expanded program of student financial assistance by means of educational opportunity grants, college work study programs, and the guaranteed student loan program for all eligible students. In addition, monies were appropriated for strengthening Teacher Training (including vocational teaching) through Title V of the Act, which was designed to "improve the quality of teaching and to help meet critical shortages of adequately trained educational personnel" (12, p. 358). Not less than 10 percent of the monies appropriated for Title V was to be devoted to the training and development of vocational personnel.

In the passage of the Educational Amendments of 1972, Congress signalled its continuing support for the concept of expanded access to postsecondary education. The Basic Education Opportunity Grant (BEOG) established an entitlement up to $1,400 or one-half the cost of attendance, whichever is less, for students who pass the requirements of a stringent needs test. In addition, the BEOG Program was designed to serve as a means for stimulating institutions to compete for students. Passage of this landmark legislation put Congress firmly on the side of facilitating student choices rather than expanding direct support to institutions.

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*For a charting of growth in expenditures and enrollment in higher education, see Figures 5 and 6, Appendix A.

THE CHANGING ROLE OF THE STATES

The degree of involvement of the federal government in both vocational education and higher education has had the effect of overextending and over-burdening state and local administrations. The trend toward centralization of decision-making authority at the state level can be traced, in large part, to the varied and ever expanding regulations imposed by the federal government. The detailed planning requirements, periodic surveys, compliance reports, not to mention budget justifications and daily head counts, conspire to force both the local and the state administrator into endentured servitude to the federal bureaucracy (7).

The 12-fold increase in expenditures on higher education and the 55-fold increase in support for vocational education since 1947, has led not only to growing federal demands for improved performance but also to new forms of control and decision making. Both area vocational schools and community colleges are "becoming enveloped in a larger system of relationships with multicampus central offices and statewide agencies. Increasingly, the process of higher education (read as postsecondary education) is becoming entangled in a thicket of bureaucratic regulation--from professional and accrediting agencies, unions, the courts, state governments, and the federal government." (14, p.xx). What the second Newman report and other commentaries on higher education raise as a concern with regard to higher education is of equal importance in the design and delivery of postsecondary vocational education programs. One of the concerns of this and other chapters of this report will be to explore ways in which public support and accountability can be ensured without building pressures to standardize or "systematize" all forms of postsecondary education as we have at the elementary and

An additional provision of the 1972 Amendments was the establishment of the 1202 Commissions as a mechanism for ensuring that such postsecondary institutions as community colleges, area vocational schools, technical institutes, and even proprietary schools would be adequately represented in the formulation of statewide postsecondary education plans and policies. Subsequent rulings by the Commissioner of Education gave the Governor of each state, or eligible territory, the option to designate an existing state agency or Commission as the 1202 Commission in lieu of establishing a new commission.

In a speech before the 1973 National Workshop on Federal Programs and Resource Development sponsored by AACJC, Congressman James O'Hara, Chairman of the House Post-Secondary Education Subcommittee, remarked that "section 1202 does not require the Secretary of HEW or the Commissioner of Education to prescribe regulations (for appointing commissions). It describes how they shall be appointed by the states and let's let it go at that!" (15). It was Congressman O'Hara's perception that once established 1202 Commissions could then be designated as recipients of monies appropriated by Congress for improved facilities and for the purchase of equipment. (These two provisions were extensions of a previous authority passed by Congress in 1963 under the title of the Higher Education Facilities Act of that year. However, in 1972, not only was the financial assistance for the improvement of undergraduate instruction--Title VI--extended but the appropriations for the construction of academic facilities, Title VII, were expanded to level of $300 million in 1974-1975).

secondary levels. While the trend has been in that direction, an argument can be made for the preservation of diversity, not only among four-year colleges and universities but among area vocational schools and community colleges as well.

One rather ominous report on the roles and functions of area vocational schools, technical institutions, community/junior colleges, CETA sponsored skill centers and other units of postsecondary education suggests that our concern over the homogenization of services in response to pressure to strengthen or enhance enrollments may be too late. In a survey of postsecondary educational units within the North Central Accreditation Region, the North Central Community Junior Colleges Council found that "all seven identified postsecondary educational units intend to increase the comprehensiveness of their role and function over the identified mission areas" (9, p. 1). Figure 1 supports the Council's concern over "the trend toward increased comprehensiveness (and homogenization) when educational units find themselves in direct competition for scarce resources or for limited student clientele...postsecondary educators will need to find ways to cooperate with respect to role and function, and state planners will need to find ways to lower the potential for direct competition with respect to mission, clientele and scarce resources" (9, pp. 1-2).

The Council's report examines in some detail how each of the 19 states making up the North Central Accreditation Region are governed and the number of area vocational technical schools, technical institutes, and community junior colleges located in each state. The obstacles they identify and the solutions they suggest make for interesting reading.

TYPES OF INSTITUTIONS	ROLES						
	VOCATIONAL	TECHNICAL	LOWER DIV. COLLEGE	ADULT EDUCATION		DEVELOPMENTAL	CAREER COUNSEL
				CONT.	ABE		
AREA VOC. SCH.	X	(X)	E	X	(X)	X	X
TECHNICAL INST.	(X)	X	(X)	X	(X)	X	X
COMM. COLLEGES	X	X	X	X	(X)	X	X
JUNIOR COLLEGES	0	0	X	(X)	(X)	X	(X)
UNIV. BRANCHES	0	E	X	X	E	X	X
SKILL CENTERS	X	0	0	X	X	0	X

FIG. I: Current and Future Roles of Post Secondary Institutions (19 North Central States)

LEGEND: X = Primary Role

(X) = Secondary Role

E = Emerging Role

0 = None

SOURCE: North Central Accreditation Region Council of Community Junior Colleges Task Force Report, Oct., 1977.

Both state and federal governments, during periods of financial stringency or national turmoil, seem to unleash, in response to political pressures, a flurry of legislative initiatives which both enhance and restrict the delivery of educational services.

The Carnegie Foundation for the Advancement of Teaching during the period of the thirties sponsored a series of influential studies of the role of the states in higher education. In their more recent commentary on the state level status of higher education, they draw a parallel between the thirties and the seventies:

> (1) The current financial stringency was a problem 40 year ago and so it is now. (2) There then existed a considerable tendency toward unification and singleness of control of state public higher education; such a tendency also exists now, but in a greatly augmented fashion. (3) Some institutions then had been led to increase their offerings without due regard to the possibility that at some time they may not be able to maintain so expanded a service. (4) Attention was called then to the variations between the states and certain aspects of higher education (with 24 tables to prove the point); in this commentary we set forth many divergent patterns (with more than 24 tables!) (7, p. x).

The Carnegie Foundation's analysis of the role of the states in higher education may well be applied to vocational education. They recommend that where state boards expand beyond the advisory function to that of regulation, a consolidated board is advantageous because it has the potential of making better use of funds through avoidance of duplication of effort and insistence upon interinstitutional cooperation. The report recognized, however, that consolidated boards often become more concerned with systematizing the delivery of postsecondary education and less with the preservation of diversity. In large states, a consolidated board because of its span of authority and complexity demands strong administration and leadership. In the long run, a consolidated board may yield to outside pressures to homogenize the services and functions of its member institutions, thus destroying diversity of forms and functions which have long characterized higher education in this country. The report speculates that "it might be better public policy for a state to be able to relate to several competitive institutions or segments than to one single power block." (7, p. 14).

While the growth of state boards of higher education and post-secondary vocational education can be traced to periods of expansion in the demand for access to both types of education, the growth in authority and responsibility of state boards for community colleges has not followed a parallel course. Historically, community colleges evolved under the jurisdiction of state boards of education or departments of education, as most earlier colleges (pre-1960) were under the administrative control of local school districts. In such cases, the state played a coordinating role even though the review and planning authority varied widely from state to state. As community colleges emerged as separate autonomous institutions during the sixties, some states wisely viewed them as different from other institutions of higher education and awarded separate but equal status. Their rapid growth and widespread appeal, however, threatened some already established power blocks, who responded by consolidating their control and treating community colleges as just another rung in the ladder of higher education. Where state boards for community colleges were established they were done so in the expectation that they would promote cooperation rather than competition between the two-year institutions and other institutions of higher education.

The establishment of most state coordinating boards and agencies of postsecondary education were created during the 1960's "in the hope that they would foster complementary rather than competitive or duplicative higher education institutions and services" (4, p. 27). Under the Higher Education Facilities Act of 1963, for example, there was a requirement that states develop coordinative or master plans for higher education. Similarly, the Vocational Education Act of 1963 mandated that all decision-making authority regarding federally supported vocational education programs be consolidated under one vocational education board. Many of the master plans adopted during the decade of the sixties attempted to overcome potential duplication of effort by community colleges, four-year institutions and vocational schools by spelling out their specific jurisdictions and goals. It was expected, for the most part, that state universities would focus their attention on professional schools and research, that teachers colleges would be primarily concerned with the training of professionals for work in public schools, that community colleges would provide low cost, comprehensive postsecondary educational opportunities, and that area vocational schools would serve vocational training needs. While this was their goal, most master plans were honored more in the breach than in the practice.

In the onset of the seventies, however, the shift in federal funding priorities from the support of higher educational institutions to student-centered support programs, and the plateauing of federal appropriations for vocational education* led to increased competition among postsecondary institutions for students. Area vocational schools, for example, faced the possibility of declining enrollments of students in the age category 16-20, together with a "real dollar" decline in federal support, are discovering that they must aggressively market their services to older adults or suffer the consequences. As competition increases and the education tax dollar becomes even scarcer, pressure is building on both the state legislatures and on Congress to impose additional controls to ensure cooperation at the local level.

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*For a fuller accounting of the changing federal priorities with regard to manpower training see Appendix A, Figures 7 and 8.

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CHAPTER 3

PATTERNS OF FINANCIAL SUPPORT*

INTRODUCTION

Recognizing the widespread support and interest in expanding the occupational offerings of community colleges and area vocational schools, state legislators and members of Congress have been reluctant to withold increased financial support. Faced with a persistent rise in operating costs, however, state legislators and local authorities have opted to raise tuition (in the case of community colleges), ask for additional tax support, or cut back on educational programs. None of these options are particularly appealing. Elected officials are understandably reluctant to raise tuition cost because of the negative impact on one of the basic purposes of open access educational institutions (3). Support for Proposition 13 in California illustrates how property owners feel about raising tax support. And neither legislators nor tax payers are happy with the option of cutting back on educational programs.

Financial support for community colleges and area vocational schools has usually come from some combination of local taxes, state taxes, federal taxes, gifts and grants, and student tuition. The sources of support have by tradition been property taxes, excise taxes, sales taxes, income taxes, intangible taxes, and inheritance taxes. The reliance on these revenue sources by different levels of government has been fairly consistent: property taxes serving as a major source for local districts, sales taxes receiving major emphasis at the state level and income taxes serving as a major source of revenue at the federal level (4).

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*This chapter was principally authored by Dr. Roger Bezdex who served as a consultant to the project.

Community colleges were largely supported by local districts until the 1950's when state support became more available. Many students of the problem believe that the local control of the community college was dependent upon the fact that local support provided 51 percent of the operating budget. Increased state interest in the planning and development of community colleges has been accompanied by increased state coordination, increased state support, and, as we have already observed, increased state control. The motivation to obtain more funds from student tuition has been a persistent force over the past decade as budget became more binding (6). Consequently, tuition charges have risen steadily during the past ten years in practically every state.

Area vocational schools, while not posessing the option of raising tuition charges, have also experienced increased centralization of budgeting authority at the state level. As federal support has plateaued or declined (in constant, or real dollars), state and local taxes have had to be raised to make up the difference. Added federal requirements--expanded programs for the physically handicapped, bilingual vocational training--together with new federal and state requirements further burden an already worsening condition. What part articulation plays in controlling costs or adding new requirements (and therefore additional costs) to an already clouded picture is the concern of this chapter.

PROBLEMS FOR ARTICULATION

After an exhaustive study of both the goals of the nation's community colleges and the manner and degree to which they were financed, Wattenburger and Starnes concluded that the financial support patterns of the states often do not provide adequate funds or allocate resources in a proper fashion to enable the goals of the educational systems to be implemented (7). They identified a number of problems, some of which are relevant to articulation. One of the problems concerns those states which support community colleges by means of a combination of state and other funds. There is still adequate support in many instances, especially when the local tax dollar is a major component. This necessity to stretch generally inadequate budgets makes efficient programming and institutional articulation all the more critical.

Another problem that they identified is that the formulas used to distribute state funds are usually based upon student credit hours. The courses for credit constitute only a part of the community college or vocational school program. States tend to provide these funds on a flat per student basis or on a per student credit hour basis even though it is well documented that some courses are two to three times as expensive as other courses. This encourages institutions to offer the least expensive courses.

Funds for vocational education are often allocated separately and in a manner which encourages duplication of effort in many subject areas. Separate financing mechanisms for vocational schools and community colleges usually encourages wasteful duplication. In addition, some states provide support for full-time day students only, thus part-time students contribute little in the way of revenue from the state. Finally, some states do not provide funds for counseling (2). Student service support is computed upon a full-time equivalent (FTE) basis even though many part-time students require a similar service.

A FINANCIAL SUPPORT PATTERN TAXONOMY

Wattenburger and Starnes found that the various states' methods of allocating funds to community colleges and vocational schools are very diverse. The funding allocation formula in different states has evolved over time according to the educational requirements of the state and the development of its vocational education and community college programs. They did identify, however, sufficient similarities in existing programs to construct a simple taxonomy of funding allocation patterns which fit four general models of support. The four funding support models constructed by Wattenburger and Sterns are: (1) negotiated budget, (2) unit rate formula, (3) minimum foundation and (4) cost-based program funding. Each of these funding formulas has different implications for interinstitutional efficiency and program articulation (7).

Negotiated Budget Funding

Negotiated budget funding refers to state funding for individual institutions which must be either annually or bi-annually negotiated with a state legislature and/or state board of college representatives. An additional requirement may be analysis and approval of each individual college's budget either as a single entity or by line item.

Most of the states using this method have no formula for budget preparation or fund allocation. Full state support should enable complete equalization, depending upon how the state faces its responsibility for full support and the method of budgeting. One advantage of this method is that every legal institution can be held accountable for its performance. The major disadvantage, however, is that a large state level staff may be required, and this may generate a tendency toward state control. Pressure to regulate both revenue and expenditures can threaten local decision making and responsiveness to local needs. Combining full state support and negotiated budgeting can encourage state level decision making.

Unit Rate Formula Funding

Unit rate formula funding refers to state allocation of funds to local institutions on the basis of a simple formula specifying a stated number of dollars per unit of measure. The units of measure in the formula may be units of instruction, enrollment, output and/or some combination thereof. A minimum local tax levy may or may not be required. Unit rate funding is, in reality, a flat grant method. The state funds are based on some measure of the number of students receiving instruction and/or other services.

Both minimum foundation funding and cost-based program funding are extensions of unit-rate formulas. Minimum foundation funding represents an advance in the guaranteeing of an acceptable level of support for improving educational opportunity where both state and local taxes are used as funding sources. Cost-based program funding represents a refinement in the direction of funding based upon actual costs for operations. Unit rate formulas represent a flat grant method, and funding thus does not depend on the local tax paying ability of a district. A minimum local tax levy may be required for eligibility to receive a state grant but the rate amount for the grant is uniform statewide. Unit rate formulas are essentially a flat grant method thus equalization of educational opportunity for all students in a state is virtually impossible.

The major advantage of this method of financing is local control of budget decisions and of major expenditures. A major disadvantage is that unit rate funding neither relates directly to an institution's responsiveness to local needs nor provides incentives for articulation or for improvement in programs and services. Also, accountability provisions are lacking. Funding is not related directly to expenditures or costs other than through set ceilings and state support. It is possible to provide program direction through funding incentives (as in New York), but only if special funding rate categories are established in conjunction with qualifying criteria for eligibility.

Minimum Foundation Funding

Minimum foundation funding refers to state funding for individual community college and vocational education districts computed at a variable rate dependent upon the local tax funding available at a prescribed minimum millage levy and/or providing a state guaranteed mimimum level of support per student measure when state and local funds are combined. The allocation of state funds may be expressed as either a set dollars-per-student measure amount less the required local millage levy funds or the approved district budget minus the amount produced by the required minimum local tax levy. Minimum foundation funding is also referred to as equalization funding (7, pp. 19-20).

Equalization can be approximated when there is no local college or local district discretion to assess higher taxes or modify tuition and student fees. Local funding depends on the value of taxable property and state funding varies inversely with the local property value. However, it is questionable whether the funding of community colleges or local school districts should be purely a function of district wealth, either directly or indirectly.

Minimum foundation funding of community colleges is an extension of the foundation approach to financing of public schools. A major disadvantage of this method for financing colleges is the impact of student tuition and fees on equalization of expenditures per student. Only in cases where student fees are absent or uniform statewide and assessment of property evaluation is uniform statewide can equalization be achieved. Although minimum foundation funding provides for local board control of expenditures, it may be necessary due to the relatively high local tax funds required. The method does not provide any apparent incentive for promoting articulation or improving accontability. Outputs are not related to expenditures or costs of programs or services.

Cost Based Program Funding

Cost-based program funding refers to the allocation of state funds on the basis of multiple cost centers, detailed instructional discipline categories, program functions, and/or budgeted object of expenditures. Cost studies at either the state level or the local level or both levels may be an integral part of the funding process or a required separate activity.

Cost-based program funding has high potential for promoting equal opportunity when costs are accurately assessed on a statewide basis and are fully funded. Equitability can be enhanced for students, taxpayers, and colleges. Accountability is inherent in this method when cost analyses are an integral part of the process. State level incentives to promote articulation of local college operations may be included but there is a danger that funding based on statewide average costs could discourage articulation and efficiency, since lower costs result in lower subsequent funding levels. Responsiveness to local needs and local control decisions with respect to program direction and budget could be hampered by state level intervention. Safeguards guaranteeing local inputs must be built into the procedure in order to avoid this possibility. The most common differentiation in funding for instructional programs is made between academic transfer courses and vocational/technical courses. The use of instructional discipline categories as cost centers is evident in both the states that fund according to course or student measure and in the states that fund according to instructional positions.

ALTERNATIVE TAXONOMIES

There are many possible ways to categorize the method developed to finance community colleges and area vocational schools, taking into account the various percentages of income from different sources and the ways in which these amounts can be determined. We have discussed one taxonomy of four funding support models---negotiated budget, unit rate formula, minimum foundation, and cost-based. There is another taxonomy, however, that is based on the degree and nature of government support for educational institutions and which has some significant implications for interinstitutional efficiency and program articulation. Following Garmes (5) and other (6), the financial support patterns for community colleges and area vocational schools can be broadly categorized into three groups: market economy models, planned economy models, and mixed models. Each group contains specific variations of these models. This section describes these funding models and discusses the implications for articulation of each.

Market Economy Model

There are three main variations of the market economy model of financial support for higher education: the completely private system with no government aid, the private system in which grants are given to individual students, and the private system in which grants from government bodies are available to individual colleges. All three models and how well each meets various interinstitutional efficiency and articulation goals are discussed below.

A. Completely Private System. This represents the market economy in its purest sense. All institutions are private and are neither controlled nor subsidized in any way by the government. There are no indirect subsidies through grants to students and no source of standardized information.

There are presently a few private, non-profit institutions operating in the U.S. that fit this model, and many of the proprietary (profit-making) vocational schools in the U.S. also fit it. However, even in these cases, the model is not completely applicable because private institutions are in competition with other institutions that receive substantial government subsidies, and this distorts the operation of the market system.

Implications for Articulation. This financing system does not prevent duplication among levels of education. Since there is no control of programs, any institution is free to offer any program it wishes to. However, this system in practice often does a good job of preventing wasteful duplication, for duplication that is not economically justified is soon ended for lack of support. This is a major advantage of this method of financing.

Such a system strongly encourages individual institutions to operate their own programs efficiently, because they must compete in the open market with other institutions. The schools that operate the most efficiently will be the most profitable. The private market provides strong incentives for efficiency, except where a natural monopoly exists, and community college and vocational education is not a natural monopoly.

In general, the major advantages of this system of financing private junior colleges and vocational schools are the promotion of a greater variety in institutions and programs, automatic regulation of the amount of education provided, encouragement of efficient operation, and a lessened burden to the taxpayers. The major disadvantages are the lack of equity for students (both in a geographic and an economic sense) and the tendency for the profit motive to encourage the provision of educational programs that can give the appearance, rather than the reality, of quality.

B. Private System with Government Grants to Students. In this system, junior colleges and proprietary vocational schools receive no government money directly, but rather, receive it indirectly through government grants (or "vouchers") to students. Control of the institutions is still completely private and they are free to provide any educational programs for which there is a market.

Examples of private institutions that fit this model exist in most states, for the federal government provides student aid that may be used by students attending private institutions (assuming they are properly accredited). Many states have similar aid plans. Student support under the G.I. Bill was similar to this model, as were the "student voucher" experiments of the early 1970's.

Implications for Articulation. This system retains the advantages for articulation possessed by the completely private system and it has the potential of providing, through the use of a computerized evaluation system, more adequate information for the potential student consumer. In general, the market works well where it is easy to evaluate the worth of a product or service. But the outputs of education are often amorphous and difficult to evaluate, and in this situation the profit motive may not coincide with actual needs. However, the private sector does an adequate job of providing the sort of vocational training that prepares students for specific jobs, and the proprietary sector is surviving in spite of competition from subsidized community colleges and vocational/technical schools.

C. Private System with Government Grants to Institutions. In this system, junior colleges and vocational schools are private but they receive some direct government subsidies. The subsidization is usually on a formula basis that (supposedly) does not interfere with the institution's right to spend the money as it desires.

The best example of this financing system is in New York State, where private institutions are paid by the State: $800 for each bachelor's degree awarded, $600 for each master's degree, and $3,000 for each doctoral degree. This is essentially a system of revenue sharing, in which the government gives unrestricted money to private institutions. The New York system of financial support is, in reality, somewhat more complex than this classification indicates. For a fuller discussion and analysis, see (4) and (7).

Implications for Articulation. This financing model does little to prevent wasteful duplication among levels and types of institutions. Of course, in the market economy set of models it is presumed that the forces of the marketplace will take care of the problem. However, in this case, to the extent that government subsidy makes it possible for institutions to survive that otherwise would not, the forces of the marketplace are distorted. Thus, this financing model does not encourage interinstitutional articulation as well as the two previously discussed market economy models.

In genera., this model has several disadvantages that do not exist for a private system with grants to students, and few compensating advantages. However, this model is attractive to private institutions presently facing financial problems, and may be a more cost effective alternative than providing public schools to replace private institutions that discontinue operation.

Planned Economy Model

Some community college and vocational education systems strongly resemble planned economies with both their advantages and disadvantages --the prototype being the vocational school or the community college system completely controlled by the state (5). In such a system there is no local financial contribution and the administration of each institution is responsible to a central state board. Educational goals for the system are centrally decided and each campus is told how many students it shall have and what courses and programs it shall offer. A detailed budget for each institution is approved centrally by the board or by the legislature, line-item by line-item, with movement of funds between line-items difficult or impossible. Complex methods of budgeting and control are emphasized. There is little opportunity for those involved locally to shape the institution to meet local needs, and the bureaucratic control required by central authority can be stifling, not to mention added cost burden. The goals of serving the needs of the state and of elimination of wasteful duplication and frivolous courses are achieved, but at the expense of reduction of consumer choice and inefficiency (1). The two finance models are based on the idea of planned economy as discussed below.

A. State Financing With Centralized Control. This is the purest form of the planned economy model. Individual institutions are, in effect, branches of a centrally controlled, statewide school system, and the budget is established by the state board on a line-item basis. There is no local financial contribution and no mechanism for local decision making on programs.

It is an oversimplification to categorize any state financing system into this or any other model. However, the following states have financing systems which are similar to this model: Alaska, Colorado, Georgia, Iowa, Kentucky, Massachusetts, Montana, Oklahoma, Utah, Virginia, Rhode Island and Puerto Rico. Massachusetts provides perhaps the clearest example of such a model.

Implications for Articulation. This financing system does encourage interinstitutional articulation: it prevents wasteful duplication among the institutions and levels of education in the state because the amount of duplication or overlap can be regulated by the state. However, this system discourages intrainstitutional articulation. The system of line-item budgeting and appropriations based on approved budgets ensures the existence of a tendency common to all government agencies. Each community college or vocational school overstates its budget needs, assuming they will be cut at the state level. Such a budget is rarely underspent, on the assumption that if an institution spends less than appropriated, its appropriation will be cut the next year. In addition, it is usually impossible to carry over a saving to the following year, for unexpended funds revert to the state treasury. Thus, there is a strenuous effort made at the end of the fiscal year to ensure that all unexpended monies are encumbered.

In general, the centralized model tends to provide equity to students and taxpayers, to keep the monetary demands of the community colleges and area vocational schools within bounds, and to prevent wasteful interinstitutional duplication. But it does this at the expense of being less responsive to local needs, of ignoring the private sector, and of having inadequate mechanisms for promoting efficient intrainstitutional articulation.

B. State Financing with Some Decentralization of Control. This model implies little or no local financial contribution to community colleges or area vocational schools but it attempts to alleviate some of the problems of the centralized control model by allowing individual institutions to have some say in how they spend their money. This requires some form of formula budgeting, where state money is allocated on the basis of formulas that relate to the needs of the institution. Whatever the type of formula, the emphasis in this model is on state allocations based on a formula, thus lessening the need for centralized state control of budgeting and program. The states that have systems that fit into this model are: Connecticut, Florida, North Carolina, South Carolina, Tennessee and Washington, with those of Florida and Tennessee fitting most closely.

Implications for Articulation. The major difference with respect to articulation between this model and the completely centralized model is that this model fosters some innovation while increasing the possibilities of wasteful interinstitutional duplication.

One problem with this approach has to do with the difficulties of classifying FTE by program. In most cases this can be done by classifying courses by program and then counting credit hours registered in each course. There will be a tendency to design low cost courses that can be classified into high cost categories, and then require these courses of all students in certain programs. Another problem is that the fewer the number of cost categories, the more likely it is that certain courses or programs will be badly overfunded or underfunded. On the other hand, if the number of cost classifications is expanded greatly, the problem of correct classification courses is multiplied, and the difficulty and cost of cost studies increases. In general, however, it appears that the formula budgeting method using program cost classification is a better budgeting approach (5, p. 61).

Mixed Models

The market economy model and the planned economy model represent opposite extremes. While examples of both exist in the U.S., it is evident that in most of the state the public has been unwilling to support either of these extremes. The market economy model represents complete freedom to determine locally what to offer at the expense of any statewide coordination or control. The planned economy model offers coordinated statewide effort toward state determined goals at the expense of a loss of local control and efficiency.

The third class of models, the mixed models, represent a kind of middle ground between the two extremes. The thing that characterizes them all if the existence of a financial and control partnership between the state government and the local government. The systems fitting these models are public institutions. The idea of the state/local partnership is to enhance the influence of the local community in the determination of the programs so that the programs can meet the needs of the local community as decided by that community. The four mixed models discussed here are distinguished from one another by the manner in which the amounts of the state and local shares are determined (5).

A. Percentage Matching. States using this method usually allow the local vocational school and community college to set their own budget as desired. The state then agrees to provide a percentage of this budget, while the remainder is to be made up from other sources, mostly tuition or local taxation or appropriation. The intent of percentage matching is to encourage local institutions to provide what is needed in their localities without interference from the state; the state only agrees to shoulder part of the cost.

There are five states with percentage matching systems for financing vocational schools and community colleges: Maryland, Missouri, New Jersey, New York, and Pennsylvania. However, most states have been forced to set a maximum on the state's participation. Where this maximum is set too low, the effect is that of a flat grant--only in Pennsylvania does the system appear to be operating in an almost pure fashion.

Implications for Articulation. The percentage matching system does nothing to encourage interinstitutional articulation. The incentives that work in favor of local determination of programs may work against prevention of duplication. It does, however, provide an incentive for the colleges to operate their programs efficiently. This concern could, of course, encourage the local college to make as efficient use of all community resources as possible. The incentive comes from the fact that the budget it locally determined and a portion of it locally raised. The community college is free to spend this money as it sees fit, and the more efficiently it does this, the more it will be able to satisfy its local constituency while keeping taxes down.

In general, the percentage sharing financing model caters strongly to the right of the local institution to serve its community in the way it and its community see fit. It does this at the expense of issuing a blank check on the state treasury and doing little to encourage equity to students and to taxpayers.

B. Flat Grant. Under this system the state gives each area vocational school or community college a grant based on a set number of dollars per FTE student. The institution then raises the balance of its budget through local taxation, tuition, or otherwise. Primary control rests with the local school and its locally elected or appointed board.

At least nine states have a funding formula that is flat grant in form: Colorado, Kansas, Mississippi, New Mexico, North Dakota, Oregon, Texas and Wisconsin. The flat grant funding system is another way in which states have attempted to give community colleges and area vocational schools money without dictating the content of their programs.

Implications for Articulation. Under this funding system there is no mechanism to prevent wasteful duplication of program offerings. The flat grant model, with its local control and opportunity to vary the local tax rate, has some incentives for achieving inter-institutional articulation. In achieving this, the flat grant model does better than the planned economy models, but worse than the market economy models (5, p. 66).

The flat grant system does not require any more in the way of state regulation than mandating the method of accounting and reporting student enrollment. If there is only one flat grant rate, colleges will tend to offer lower cost courses. If there are a number of rates, they will tend to concentrate on those programs whose rates are higher than costs warrant. If the state attempts to circumvent these tendencies by frequently updating the cost factors, a state-mandated cost-accounting system must be instituted to accumulate the necessary cost information.

C. Foundation Program. This funding program is a method of state and local sharing of current educational costs that emphasizes evening out the differences in a community's fiscal ability to support a community college or an area vocational school. This method is used extensively in elementary-secondary education. In essence, the state sets a certain number of dollars per student as representing the foundation necessary for an adequate community college program. The state also specifies a local tax effort that must be made and may specify a tuition rate. The amount of the budget guaranteed by the state is equal to the foundation amount per FTE times the FTE of the institution.

There are four states whose state aid programs for community colleges and area vocational schools are foundation in form: California, Illinois, Michigan and Wyoming.

Implications for Articulation. The foundation program model does little to prevent wasteful duplication among institutions or levels of education. The existence of local controls is the only feature of this plan that makes it better at achieving inter-institutional articulation than the planned economy models. The fixed local tax rate makes it poorer than the other mixed models.

If the foundation guarantee is set at such a level that the college with the greatest local taxing ability does not raise as much as the guarantee through the required tax rate and tuition and if no college is allowed to raise additional money above the required amount through local taxes, the foundation program will be absolutely equalizing; but this is rarely the case. Often the legislature because of pressure of other demands on the state treasury sets the foundation program unrealistically low, which means that the richest institutions will raise more money that the required tax rate and tuition, even with no state aid, than the poorer colleges will get with state aid.

D. Power Equalizing. The idea of the power equalizing model is to allow the local entities controlling the vocational schools and the community colleges to determine in cooperation with their communities how much effort they wish to put into education while still not allowing differences in local taxable wealth to influence the amount spent. The power equalizing plan has also been described as a "guarantee to assessed valuation" or "guaranteed yield" plan. Essentially each district is to proceed to raise money by levying a tax rate dependent only upon the amount of money per student it wishes to raise.

Of the models discussed here, this is the only community college financing system that is not currently used in some form in the United States. Power equalizing models have, however, been adopted in various forms by a number of states for financing elementary and secondary schools and area vocational schools. There has been a great deal of favorable discussion of power euqlizing at the elementary and secondary level, but this new concept took time to take hold. In 1969, only seven states had systems partially based on this concept. By 1975, however, 21 states distributed part of the elementary and secondary funds on a power equalizing basis; but, as indicated, no state presently uses this method to finance its community colleges.

The power equalzing plan has a major disadvantage in that it has little incentive for institutions to keep expansion within bounds. Because local districts are allowed to decide upon their levy, the amount htat must be supplied by the state treasury cannot be easily predicted nor can it be easily limited without destroying the equalizing aspects of the scheme. State officials tend to fear that this plan would encourage poor districts to levy high taxes knowing that for every dollar raised locally, several dollars would come from the state. At the same time, the rich districts might decide to limit their spending thus returning very little money to the state.

The power equalizing plan also suffers from a flaw of the foundation plan in that institutions are encouraged to expand enrollments with the knowledge that additional students would be, in effect, fully paid for by the state. Because it encourages districts to work out their own programs, this plan does nothing to prevent wasteful duplication among and within the levels of education. On the other hand, it is similar to percentage matching in doing a better than average job of promoting efficiency within a local community college or area vocational school.

E. Modified Power Equalizing System. For states that choose to have a state-local financial partnership, a hypothetical modified power equalizing system can be devised (5, pp. 94-97). In such a system, tuition would be charged and a program of student grants set up. The state-local partnership would be based on a power equalizing model. Equity to the student and to the taxpayer demands a foundation plan model or a power equalizing model if there is to be a state-local partnership. The power equalizing model is preferred because it leaves to the local community the decision as to how heavily it should tax itself for its postsecondary educational institutions while putting all vocational schools and community colleges on an equal footing in regard to the amount raised for a given tax effort. In order to keep the finance plan from putting such a heavy and unpredictable burden on the state treasury, power equalizing models should be formulated in terms of a guaranteed assessed valuation per capita in the district rather than per student in the school. Finally, the tax base on which the guarantee is made would be all taxable residential property in the community school district. Nonresidential property would be assessed by the state and taxed at uniform rates by the state. The amount thus raised would be used by the state to help in its program of power equalization.

This model is better than the ordinary power equalizing model at achieving the objective of keeping expansion of the system within bounds because additional students are not subsidized by the state. However, it is not as good as complete centralized control in achieving this because the district can increase its state aid by increasing its tax rate. The plan should be roughly the same as ordinary power equalizing in the way it achieves inter- and intrainstitutional efficiency. Its poor ability to promote inter-institutional efficiency and articulation is its major flaw.

SUMMARY AND OBSERVATIONS

Our analysis of the effect of the financial support patterns and funding formulas for community colleges and area vocational schools on program articulation and inter- and intrainstitutional efficiency suggests a number of conclusions. One observation from the perspective of follow-on research is that very little rigorous research has been conducted into the relationship between financial support patterns and articulation. A large volume of literature exists on the many aspects of educational articulation at the level of higher education. Similarly, a great deal has been written on alternate financial support for community colleges and local school districts. Nevertheless, research assessing the impact of funding priorities, schemes, budget formulas, and allocation patterns on institutional efficiency and articulation is virtually nonexistent. This is a topic that should be given the highest priority in future research.

A second major conclusion which emerges here is that the specific method of financial support utilized to support community colleges and area vocational schools can, and does, have a major influence on articulation. Some of the financial support models discussed, such as the private economy model with grants to students, meet both the inter- and intrainstitutional articulation goals relatively well. Other models, such as most of the mixed economy models, do little to encourage program articulation either within or among institutions. Other models tend to encourage interinstitutional articulation, but discourage intrainstitutional articulation, or vice versa. For example, the planned economy/centralized control model performs very well in promoting interinstitutional articulation, but does little to encourage intrainstitutional efficiency. Very little of the debate over the best methods to use to fund higher education has ever dealt with the likely impact of the funding method utilized on program articulation.

More generally, it must be recognized that any recommended strategy for financing community colleges and area vocational schools must be judged on the basis of a set of criteria broader than the likely impact on articulation. Surely the impact of the funding mechanism on such things as controlling costs and on promoting equal educational opportunity must also be considered. Thus, even if we were to conclude that some version of a market economy funding model would be the best at promoting institutional efficiency and articulation, we still might recommend against adaption of this model on the grounds that it does little to promote equality of educational opportunity. Articulation is an important, but not necessarily decisive, factor in determining the optimal financing strategy for community colleges and area vocational schools.

This review also suggests certain implications relating to the likely impacts of different forms of federal assistance to education on articulation. For example, programs of the "funds pass through" variety, such as the Comprehensive Education and Training Act (CETA), will have a different impact on articulation than will assistance programs which provide funds directly to the institutions, such as the Vocational Education Amendments of 1976, or those that channel funds directly to the students, such as the Higher Education Act of 1972 (8). The impact on articulation of the latter two assistance programs would be similar to those of the "market economy model".

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CHAPTER 4

COOPERATION AND CONFLICT: TWO SIDES OF ARTICULATION

The exponential growth in public postsecondary occupational education programs over the past two decades has been one of the more positive achievements of federal aid to education. But continuing pressures on community colleges and area vocational schools to expand services and to reach out to serve new groups of students are confronting a different set of forces set in motion in recent years. Tightened budgets, centralization of decision making at the state level, block grants to states, and increasingly rigid compliance requirements dramatises what can happen when federal priorities change.

In Chapter 2, we traced the impact of several significant pieces of recent federal legislation and noted that while each act or its amendments laid heavy emphasis upon the importance of local initiative, each in its own way has contributed to the existing confusion over who is to offer what types of postsecondary training. Area vocational schools, public community colleges, technical institutes and even branch campuses of four-year colleges are expanding their offerings, often without first checking to see who else in the community is already providing a similar service.

State statutory requirements mandating coordination together with a growing number of voluntary arrangements stressing inter-institutional cooperation have helped to lessen the charges of confusion, duplication, and inefficiency. Voluntary cooperation, however, is not easily achieved even when external circumstances are favorable. In a sense, achieving interinstitutional cooperation is difficult because implementing desired changes in single institutions is difficult. Some states, among them California, Florida, Michigan, Massachusetts, and New Jersey, have sought to impose coordination through mandating it by statute. Others have sought to implement master plans built on voluntary compliance. The basic question at issue is whether a state mandated program of coordination or voluntary cooperation is a better means of regulating competition for scarce resources and managing interinstitutional conflicts?

In a critique of interinstitutional cooperation in higher education, Kreplin and Hanna observe that:

> Interinstitutional cooperation represents a form of interorganizational change....As such, it is subject to the traditional obstacles to intraorganizational change as well as to important obstacles and issues specific to interorganizational change....(such) arrangements run into double-trouble, since they are themselves innovative structures within higher education and one of their central objectives is the encouragement of innovation among participating institutions (12, pp. 5-6).

What these "obstacles and issues" are and the types of strategies needed to exploit or overcome them will be the central concern of this chapter. A brief review of the literature on educational change will make up the first part of the chapter. This will be followed by an examination of several hypotheses governing successful interorganizational linkage. Concluding the chapter will be an attempt to apply the linkage models explored to the problem of voluntary cooperation among public and private vocational institutions.

EDUCATIONAL CHANGE

Mathew Miles (19), among a number of other writers on the subject of organizational change, observes that innovations are more likely to be accepted when:

1. the proposed change is congruent with the prevalent ideology in the target system
2. relevant decision makers are given the opportunity to voice objections
3. systematic attention is given to all stages of the change process
4. extensive modifications in existing practices can be avoided

While introducing change into an ongoing school program (particularly at the postsecondary level) may be difficult to engineer, it becomes doubly so when two or more organizations are involved. The probability of disrupting established practices and procedures is increased in direct proportion to the number of institutions involved. Miles suggests that "this difficulty can often be avoided by creating new innovative structures which bypass vested interests, provide protection for the development and trial of innovations and aid high focus (of attention) on the work at hand; such isolation also frees the innovative enterprise from the usually anti-innovative norms of the target system" (19, p. 643). Voluntary consortia, while they represent a strategy for provoking change, often lack a strong central authority and are characterized by the existence of both conflict and cooperation (14).

As has been pointed out earlier by Patterson and Clark, interinstitutional linkages do not necessarily require building a separate formal organizational structure, but the existence of a dedicated support staff does help to insure that agendas and assignments are followed-up. Such alliances may range from the very informal such as the Physical Science Study Committee, a curriculum improvement effort, to formal compacts such as the Western Interstate Commission on Higher Education (WICHE) where separate and independent staff help to maintain inter-state cooperative arrangements (3).

While there has been relatively little research conducted on the analysis of interinstitutional linkages, a number of tentative hypotheses have been proposed which differentiate between inter- and intraorganizational structures. Litwak and Hylton (15) suggest that in order to understand the process of coordination between two or more organizations , it is necessary to examine certain structural links upon which cooperation depends. They argue that one of the distinguishing characteristics of interorganizational cooperation is the ability of the organizations involved to deal with conflict.

Another characteristic is the degree to which authority is unstructured. Individual organizations thrive on formal authority for actions. Interogranizational structures do not.

> .....interorganizational analysis suggests two important facets of analysis which differ somewhat from intraorganizational analysis: (1) the operation of social behavior under the conditions of partial conflict, and (2) the stress on factors which derive equally from all units of interaction rather than being differentially weighted by authority structure. (15, p. 398).

To illustrate their argument, Litwak and Hylton cite the relationship between nations as an illustration of interorganizational behavior--"a modicum of coordination is necessary to preserve each nation, yet there is no formal authority which can impose cooperation" (15, p. 398). In contrast, intraorganizational behavior is guided by the delegation of formal authority to personnel who act or fail to act according to their perceived role responsibilities. What is useful and provocative about this observation is that the success of interinstitutional arrangements may be for reasons which are antithetical to or contrast with the management style which characterizes a well run, hierarchically structured organization. Administrator's of bureaucracies require a different set of skills than those administering voluntary consortia.

Before exploring in greater depth the variables which undergird an effective interinstitutional cooperative arrangement, it would be useful to analyze and compare the organizational structures which typify educational institutions at the pre- and postsecondary levels.

CHARACTERISTICS OF EDUCATIONAL ORGANIZATIONS

The literature on education organizations rarely differentiate between the elementary and secondary school systems with their traditions and structures and those of higher education. Both groupings of institutions must acquire and allocate resources, schedule classes and students, provide guidance and counseling.

There, however, the similarities end. Most public elementary and secondary schools find it necessary to keep students in a subordinate role. Students must follow the prescriptions of their instructors or suffer the consequences. While individualized instruction and working with smaller groupings of students is becoming more and more popular, many instructors still follow the "podium, pointer, and poop" approach to teaching. Making the system responsive to wide ranging student needs has been the elusive goal of many a dedicated educator.

Public schools in the U. S. have been characterized "as a pyramid with staff sandwiched between administrator and students" (22, p. 21). Upward communication is less frequent than downward communication. Public schools have been described as classic bureaucracies with hierarchies of authoriey, explicit rules to guide behavior, impersonal social relations, a priori definition of duties and privileges, separation of policies and administrative decisions, use of specialists, and the appointment and advancement of personnel on the basis of merit (6).

How rigidly a school adhers to the classic Weberian concept of "bureaucracy" depends to a large extent on the principal's administrative style . A human relations approach may soften the vertical structuring of decisions. If he or she tends toward the authoritarian approach, decisions are handed down from the top. MacMichael (15), Toffler (22) and Simon (18), have characterized public schools in this country as well as other industrialized nations as essentially custodial in nature, drawing much of their emphasis on acceptance of authority and their rigid system of grading, grouping and seating from industrial organizations. This may have particular relevance to vocational education at the high school level where many vocational teachers are, in fact, recruited from industry.

At the postsecondary level, by contrast, faculty have a good deal more influence on decisions which affect their daily activities. The academician is looked upon as an independent professional (9). A strong faculty, according to Barton (1), figures importantly in the quality of the institution. While public schools tend to relegate the screening and selection of teachers to administration, colleges pride themselves in the degree of influence which faculty exercises over the selection of new staff. They also have considerable control over their own teaching schedules, the content of the curriculum and the teaching environment. They tend to exercise less influence over the selection of the president, the budget and decisions on what programs to offer, but what influence there is contrast favorably with the relative powerlessness of elementary and secondary school teachers.*

Area vocational schools and community colleges occupy organizational classifications that fall somewhere between the two ends of the continuum just described. While the area vocational schools have a greater affinity with high schools (many of them actually fall under the control of the local superintendent of schools) and, in fact, cooperatively serve the vocational needs of high schools, community colleges are more like higher educational institutions. Neither organizations fit neatly under the academic or public school umbrella, however. Area vocational schools could be characterized as single purpose institutions, in contrast with the comprehensive high school, and community colleges are more diversified than most four year institutions.

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*Teacher unions have had considerable influence on teacher responsibilities at both the pre- and postsecondary levels. Where such unions are strong, they carry a good deal of weight in the policy setting and decision making process.

Litwak and Meyer (16) suggest that all educational institutions, could be described as "professional organizations," not unlike hospitals, research oriented companies, and welfare agencies.

> It combines features of both rationalistic and human-relations styles, side by side in the same organization. In schools, scheduling of classes, fixing of hours devoted to subjects, keeping attendance and grade records, building maintenance, etc. seem to be run on a rationalistic basis, whereas classroom teaching, motivation and management of individuals and groups of children, communication and relations between teachers, etc. may be characterized by a human-relations style. Similar examples of such a mixed administrative style can be seen in hospitals, in colleges and universities, in large law firms, in industry, and elsewhere. We have called it professional administrative style because it so often highlights the relationship between professional personnel and the organization. One may argue that most organizations to some degree take this form, but some organizations, it seems to us, are exceptionally characterized in this way (16, p. 56).

The value of this model (as contrasted with the rationalistic or classic bureaucratic model) is that organizations, like schools, are required to deal with both uniform and non-uniform events. They, therefore, must invent mechanisms for dealing with contradictory forms of social relations. Since most large scale organizations engage in uniform and non-uniform tasks, the "professional organization model" explains why those administrative tasks which require on-the-spot problem solving also require a greater degree of professional autonomy. The specification of job responsibilities may be extensive among the uniform task but minimal in the non-uniform work areas. Hierarchial authority, separation of policy and administrative decisions, and the need for general rules to guide the decision making process, all are needed in overseeing uniform tasks but are likely to be less operative in the classroom.

Accepting for the moment the proposition that professional organizations have to deal with both uniform and non-uniform tasks (or with multiple responsibilities in the same occupation where both traditional knowledge or skills are required as well as interpersonal skills), one of the key questions facing these more complex organizations is how to cope with potentially contradictory social relations within the same organizational setting. One common practice in professionally oriented organizations is to physically separate departments that perform separate functions. Research departments, for example, which engage in non-uniform activities are often segregated in terms of facilities from the production departments of large corporations. Thus the former can be managed by means of a professional approach, while the latter is more likely to require an authoritarian, rationalistic arrangement.

Another mechanism for coordinating potentially contradictory social relationsihps is to assign certain individuals "transferal" responsibilities. Where organizations are based upon technological innovation, non-uniform responsibilities may become uniform and vice versa. Moving a new product from the design stage to the production state requires someone who can play the role of linking agent between the world of research with its highly collegial relationships and the world of production with its more hierarchical relationships.

Closely related to the transferal occupations are those functions which have as their primary responsibility the role of evaluation. If an organization has within it, as we have suggested, conflicting social relationships and at the same time is under pressure to adapt its services to changing market conditions, then there must be some way by which old procedures and role functions can be replaced. Decisions on when to replace one function with another can be given to someone or group charged with monitoring the continuing effectiveness of the organization's programs. In community colleges, such a service may be performed by a regional accrediting association, the Board of Trustees, or, in a more limited way, by a program advisory committee.

INTERINSTITUTIONAL COOPERATION STRATEGIES

Returning to the analysis of interorganizational mechanisms for facilitating cooperation, how can competing educational institutions preserve their autonomy while at the same time permitting cooperation in areas which might prove to be mutually beneficial?

Litwak and Hylton (15) hypothesize that successful interinstitutional cooperation can best be achieved if the institutions involved are partly interdependent, that they are aware of this partial interdependence, and that such interdependence can be initially established in areas where "uniform" actions occur, e.g., admission procedures. Too high a level of interdependence may lead to organizational mergers which are then followed by intraorganizational mechanisms of coordination. Insufficient levels of organizational awareness of the degree of interdependence may lead to unnecessary competition and conflict. And the fewer the areas of uniform actions, the less likely will be successful coordination. The key ingredient here is interdependence. Without it there would be little or no concern for setting up coordinating mechanisms.

A commonality of goals have been recognized by such authors as Katz and Kahn (10), Parsons (20) and Simon (18) as the basic element contributing to interorganizational dependency. If we hold that organizations are rationally conceived systems for coordinating the efforts of individuals or groups toward a common goal, then an awareness of interdependence among or between organizations occurs when there is communication on the goals held in common. Consequently, the clear and precise statement of common goals should help two or more organizations achieve a degree of cooperation where ambiguous or poorly defined goals may lead to conflict and competition.

Lancaster (13) offers an additional dimension to the thinking about interinstitutional cooperation. He suggests that there are five natural stages or phases through which a consortium generally progresses. Stage 1 is prior to the actual organization of the consortium. At this stage there are few perceived interdependencies and little contact among or between the organizations involved. Usually forces at play in the external world conspire to bring the institutions together. The commonality of goals being served among institutions may be more clearly perceived by those outside the institutions than those within.

At Stage 2, a formal consortium is established. A central agency or consortium staff takes on the job of programming on a one-by-one basis projects designed to serve the needs of member institutions.

At Stage 3, programs become more interrelated and stronger ties are formed because the member institutions. Conflicts and competition begin to rise. Some conflicts are the result of competition for scarce resources; others are attributable to the problems posed through association with the consortium. For example, a decision to eliminate duplicative automotive shop facilities may lead one organization to object because its staff will need to be reassigned and students scheduled into the other facility. At this point, some of the conflict reduction mechanisms described earlier may come into play to help preserve the intra-institutional social relationships as well as help to maintain the integrity of the consortium.

Lancaster identifies certain checks and balances, ajudication procedures, coalitions, and a spirit of altruism as ways of overcoming such conflict. At stage 4, continued growth of the consortium depends upon the degree to which links are truely interdependent and well developed. Lacking a strong authority structure, there must be recognition of the need for interdependency and a sense of mutual trust if a lasting basis for cooperation is to be achieved.

At Stage 5, interdependencies often result in specialization and domain consensus, e.g., one organization is given the responsibility to offer electronic technician training while another focuses on expanding its office occupations program.

Lancaster argues that the benefits to be derived from participation in a consortium are: 1. interpersonal, 2. resource sharing, 3. the development of more professional faculty attitudes and practices, and 4. through the emergence of conflict management mechanisms, unique characteristics of individual institutions can be maintained and enhanced. He concludes by observing that cooperation is a process and not a goal in itself. Consortium leadership must be sensitive to the changing nature of the cooperative relationship as it matures. The consortium staff director must be both adaptable and able to modify his administrative style as required. The central office of the consortium requires strong support from member institutions if it is to both maintain its coordinative function as well as attract significant funding. In those consortia which do not have a central staff or well thought out authority structure, decision making often depends more on politics than on legitimacy.

Conflict within and between organizations is not inherently a destructive phenomenon but should instead be thought of as a natural outgrowth of complexity. Pressures to pursue common goals, to serve a range of community needs, and to expand the numbers of agencies involved in policy formulation and planning--all point to the need for improved strategies for coping with conflict.

Reflecting on the above analysis, we might return to the earlier question: of the two strategies, (1) voluntary interinstitutional cooperative arrangements and (2) mandated coordination, which offers the best hope of reducing or channeling conflict into more productive relationships among institutions at the local level? Going the coordination route is essentially a political solution. As initially autonomous institutions are forced to participate in the larger statewide system of postsecondary education, conflict should be seen as the principle reason for coordination. The creation or emergence of coordinative devices such as boards and joint planning commissions come into existence because they are needed to cope with the inevitable conflict among agencies seeking their fair share of inadequate financial resources.

The political process that enables conflicting interests to be dealt with parsimoniously and to the mutual satisfaction of all parties involved requires communication and feedback. Often decisions are of an interim nature with negotiation agreed upon as the mechanism for resolution of differences. In the real world, most legislative bodies move crabwise toward the solution of a problem by making fragmented, interim decisions which do not satisfy all parties involved but at the same time do not engender complete and irrevocable opposition. The ultimate purpose of the political process is to reduce conflict and facilitate the serving of pluralistic interests.

Conflict, however, may not be all that disruptive to organizations or institutions working cooperatively at the local level. Grupe asserts:

> Colleges do not work together to cooperate. They cooperate to compete. Cooperative planning and programming in higher education receives impetus from individuals who believe that by combining their efforts, they will achieve goals of importance to them, to their students, to their university, to the educational system, or to society. Cooperation is not altruism. It is congenial but it must be directed at objectives that have relevance to the improvement of the educational process within the institution responsible for it (8, p. 1).

Lancaster argues, rather than being disfunctional, building interinstitutional relationships serves as a "means of regulating competition for scarce resources and managing interorganizational conflict" (13, p. 10). Foster suggests that interinstitutional coordination functions best when the university is seen as a "...forum for permanent conflict" (5, p. 9). The basic concern, then, is whether a bureaucratic type of coordination currently being adopted by many state systems is a better means of regulating competition for scarce resources and managing interorganizational conflicts than is the formation of voluntary consortia among local institutions, some of which are "professional" in their management mode and others tending about the bureaucratic.

GETTING DOWN TO CASES

The problem of building interinstitutional links between community colleges, area vocational schools and other local institutions offering some type of postsecondary vocational education, is basically one of meshing different administrative styles and procedures so that interinstitutional cooperation can occur. Where such cooperative arrangements have been successful, the contention is that fuller use of community resources are apt to be achieved and a greater number and variety of vocational education and training programs made available to potential students.

Following Litwak and Hylton's line of reasoning for the moment, those policies and procedures of a more uniform nature offer the most promising areas of initial coordination. Such practices would include admission procedures, the awarding of credit, student record keeping, etc. Non-uniform activities would include the development of curriculum, the adoption of new teaching procedures, guidance and counseling, and decisions regarding the need for new facilities. Whether or not successful cooperation can embrace both categories of activities is a matter for empirical observation. This was the rationale behind the methodology chosen for this study as outlined in the next chapter. We adopted as our operational definition of cooperation or articulation the efforts of educators at the local level to "discover, establish and continually improve relationships between policies, plans, procedures, and people"

(23, p.1).*

Achieving successful articulation among or between two or more locally based institutions requires not only common goals and uniform or standardized practices but awareness of the degree of interdependency involved. Institutional self-awareness and the value of interinstitutional cooperation, while interrelated, are difficult to establish. Solidly constructed scientific evaluation of the benefits to be derived offers one mechanism. The number of institutions, programs, and people involved, the lower the likelihood of awareness. The more specialized role people play, the lower will be the likelihood of awareness. Crises of varying kinds (financial, social, political) will enhance awareness. Each of these events will add to or detract from the level of awareness that institutions experience regarding interdependency. How pervasive the awareness is throughout an organization will obviously determine the eagerness with which one institution is ready to cooperate with another.

The level at which an awareness of interdependency occurs will often determine the nature of interaction among two or more institutions. Highly competitive organizations which are only moderately interdependent may find it desirable to limit the interaction to top management, thereby avoiding the danger of building linkages that might be viewed as subversive in nature. In some instances, intermediaries are selected by top management to represent them in order to avoid the appearance of weakness in the eyes of subordinates. Low competitiveness and moderate interdependence, on the other hand, would support the establishment of multiple levels of contact, provided a campaign of awareness could be mounted to justify the effort. This is frequently the case with high schools and community colleges. Such institutions often find it mutually beneficial to promote multiple forms of cooperation.

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*In its more conventional usage, articulation is often defined as a planned process linking two or more educational systems within a community to help students make a smooth transition from one level of instruction to another or between programs and institutions without experiencing delays or loss of credit. For the purpose of the AACJC/AVA Joint Study, however, articulation has been given a broader meaning. In the last analysis, it depends on how effective the interface between vocational education programs in a given location is.

Figure 2 offers a model for displaying the interaction effects of the various factors which elicit different forms of articulation among locally based public and private vocational institutions, assuming a moderate degree of interdependency. Recognizing that articulation may take many forms, this scheme should serve as a useful heuristic device in guiding policy makers or administrators in the selection of an articulation strategy or mechanism which best suits the situation under consideration.

As an example, let us suppose that two institutions located in a rural community decide to merge their program advisory committees in order to ensure a degree of articulation across programs, e.g., electronics, and to lighten the burden of industrial firms whose qualified representatives are likely to be small in number. Both institutions are moderately interdependent since the graduates of one frequently enroll in more advanced programs at the other. Awareness of this moderate degree of interdependence was forcibly brought home to the leaders of both institutions when a recent bond issue was rejected by the voters, thereby provoking fiscal crises on both campuses. Incidentally, the role of an advisory committee member is reasonably uniform across all vocational programs, be they at the high school or postsecondary level (24).

Figure 2 suggests that under these conditions Cell 7 offers the best strategy. The importance of this function together with the limited number of qualified industry representatives available, plus the desirability of a shared awareness across institutions would bode well for the success of such an arrangement. Illustration of this observation can be found by perusing The Johnstown, New York Case Study presented in Chapter Six.

If we were to alter the conditions just outlined, such a strategy might prove to be undesirable. The Milwaukee Area Technical College (see Chapter Six) located in a large urban setting requiring multiple links with a large number of business firms and feeder high schools would be ill advised to merge its program advisory committees because of the multiple linkage functions which they perform. Because of the likelihood that both industry and area high schools are relatively unaware of their dependence upon MATC, other strategies for creating awareness and a desire to work collaboratively with the various institutions and orgnaizations involved need to be considered. Cell 10 of Figure 2 suggests that periodic presentations to high school counselors in all area high schools offers a more successful strategy for implementing sound articulation practices in the larger, urban setting.

Number of Occup. Programs	High Awareness			Low Awareness		
	Hi Uniformity	Med. Uniformity	Low Uniformity	Hi Uniformity	Med. Uniformity	Low Uniformity
Large Number of Occupational Programs	1. Bureaucratic organizations require written articulation agreements and strong backing of key leaders	2.	3. Collegial structure requires conflict reduction mechanisms such as a coord. board.	10. State mandated coord. effective. Need for multiple links among sending and receiving institutions beginning with top admin.	13.	16.
Medium Number	4.	5.	6.	11.	14. Carefully planned and launched articulation program in area of uniform practice, e.g., computer services.	17.
Small Number	7. Requires periodic, carefully scheduled joint planning and decision making meetings of key leaders.	8.	9. Frequent informal communication between faculty members and middle level administrators.	12.	15.	18. Build trusting relationships at various administrative levels. Person to person contact most effective

FIG. 2: Forms of Articulation Under Conditions of Moderate Interdependence

Before attempting to explore other barriers to articulation, two additional comments need to be made. Litwak suggests that where one organization stresses rules and impersonal social relationships (as in Weber's model of the classic bureaucracy) and another emphasizes primary group relationships and decentralized decision making (as in the professional model), the latter tends to be the more effective in dealing with non-uniform events such as joint curriculum planning and development (15).

While each of these two organization models are necessarily overdrawn, they do help to distinguish between the more bureaucratic organizations which characterize state departments of education and even local public school systems and the more collegial organizations characteristic of most colleges and universities. Pelz (21) has studied large industrial concerns who had employees dealing with non-uniform events (e.g. scientists and engineers), and those who had to work with relatively uniform events (administrative staff and production line workers). He found that among the scientists and engineers, there was a high correlation between motivation and productivity provided they were free to make their own decisions. In contrast, those workers who were assigned more uniform tasks evidenced higher motivation and productivity when their decision making authority was restricted. Litwak observes:

> ...Where organizations deal with non-uniform events, a model of bureaucracy may be more efficient which differs from Weber's in at least 6 characteristics: horizontal patterns of authority, minimal specialization, mixture of decisions on policy and on administration, little a priori limitation of duty and privileges to a given office, personal rather than impersonal relations, and a minimum of general rules (14, p. 180).

This description is perhaps more characteristic of community colleges than of area vocational schools, many of which have been reared in the older bureaucratic tradition of elementary and secondary schools. Some of the tensions that exist between community colleges and area vocational schools can be attributed to these differences in administrative modes. Area vocational school administrators, for example, express concern that community colleges require students to enroll in "unneeded" liberal arts courses in order to qualify for the AA degree. If our earlier judgement that area vocational schools tend to mirror the needs and practices of private industry is correct, then it would follow that area vocational school programs built around the development of specific job skills for the performance of uniform tasks fit more appropriately into the bureaucratic mode. Community college administrators, on the other hand, argue that students need more than entry level job skills to qualify for and advance in not one but multiple careers. Thus, community colleges are more concerned with the development of social and problem solving skills, requiring an institutional structure that is more responsive to individual needs (4). While both institutions may feel they are correctly interpreting the demands of the private sector, conflicts in value orientations are apt to erupt.

To speak of just one type of area vocational school or community college over-simplifies the problem. Gilli (7) describes four varieties of postsecondary vocational schools: 1. specialized secondary and technical vocational schools designed to provide vocational education on a full-time study basis to persons who are in or who have left high school; 2. area vocational schools* which provide both high school level vocational education in no less than five different occupational fields to persons who are available for full-time study and to persons who have completed or who have left high school and are available for full-time study; 3. technical institutes and postsecondary vocational technical schools which offer instruction in one or more of the technologies at a level above the skilled trades and below the professional; and 4. community-junior colleges which provide vocational-technical education, under the supervision of the state board, leading to immediate employment and/or usually to a two-year degree. These differences in goals and approach must be taken into account as comparisons are made.

OTHER BARRIERS TO COOPERATION

Additional barriers likely to be encountered as bi-lateral or multi-lateral cooperative arrangements are worked out can be described in terms of communication breakdowns. Failure to develop a means of classifying curriculum objectives prevents a systematic comparison of programs by two or more institutions. The failure of curriculum planners to understand or appreciate what sequence of skill training activities are being offered often leads to duplication of course requirements. Teachers in area vocational schools find it difficult to free themselves up for collaborative planning purposes because they are expected to spend most of their time in the classroom teaching. Faculty members at community colleges, on the other hand, demand a freer hand in determining how they can or should spend their time.

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*It should be noted that the original argument in support of area vocational schools was based on the advantages to be gained through providing specialized vocational education to area high schools working together cooperatively.

Another barrier, one that has been nourished through the imposition of a separate teacher training system for vocational education, reflects the requirement that vocational teachers be trained in a vocationally certified or approved manner. Teachers trained and recruited in this way travel a different route than the typical faculty member employed in a community college. The differences in both prior experience and training are reflected in their role perceptions and teaching modes.

There are a number of other administrative problems which keep vocational schools and community colleges apart. The first is concerned with adequately differentiating a degree program from that of a certificate or a diploma program. The second is the concern with determining how best to prepare students for work, a topic we have already touched upon. What constitutes a meaningful response to changing employer needs and to the career interests of potential employees? In other words, what assurances does the vocational student have that what he or she is receiving in the way of training will after all be job relevant?

The next chapter will outline the methods used to identify those practices and procedures that led to successful articlation among institutions engaged in vocational education. The following chapter will present a series of exemplary models ehich, hopefully, can be used as guidelines by other institutions seeking to enter into various types of articulation agreements.

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CHAPTER 5

STUDY METHODOLOGY

Having traced the historical, the political, the economic and the social variables contributing to the problem of articulation, we are now in a position to take a closer look at those practices and policies which enable local practitioners to implement and carry out sound articulation programs. Historically, the growing mandate for articulation in vocational education can be traced to the positive demand for access to some form of postsecondary education. During the decades of the 50's and 60's, this demand was met through expanding facilities and programs in a variety of new and already established institutional forms, with particular emphasis on making such programs locally available. Politically, this demand was reflected in the national educational legislation passed in the 60's, together with significant amendments passed during the 70's. Fiscally, this expanded wish for equal educational opportunities was financed through the allocation of more and more tax dollars and modest tuition increases. We have also documented why states and localities tended to rue the day when the federal government modified its priorities and failed to increase its support for vocational education sufficient to offset the impact of inflation.

While these factors have been identified as external forces at work in shaping local policies, a number of other ethnographic considerations have also been touched upon. Our predisposition as a nation to support altruistic ventures through voluntary cooperation; our propensity for rationalizing and systematizing education-to-work programs; and out capacity for adjusting institutional structures to meet new needs; such factors help us to understand why people in organizational settings respond as they do to pressures to coordinate. In spite of Frank Newman and his warnings regarding creeping bureaucracy in community colleges, much the opposite has occurred. The question of the moment, though, is how have local administrators and policymakers responded? What demands are being served and through what arrangements? Who is involved? How are conflicts handled? What are the practices which give credance to the claim that this community is successfully articulating its programs, this one is not? It was with these basic issues in mind that the data gathering phase of the Joint Study was undertaken.

THE STUDY PLAN

In August, 1976, the two national associations, AACJC and AVA, representing most of the institutions and professional educators involved in postsecondary occupational education agreed to jointly sponsor a study of administrative policies and practices at local levels which have resulted in exemplary programs in interinstitutional cooperation at the postsecondary non-baccalaureate degree level. A proposal was jointly written and funding secured from the U. S. Office of Education.

Before discussing the rationale for the conduct of the study, it should be mentioned that while the two national associations have overlapping interests and common goals, each serves a different type of constituent. The American Association of Community and Junior

Colleges, established in 1920, is an association of institutions and individuals. The institutional membership is usually represented by local community and junior college presidents. Individual members have associate member status and tend to represent the points of view of various special interest groups such as those concerned with legislative affairs, student services, state administration, university-based consultants, etc. Activities of AACJC staff cover a wide variety of services to its members as well as special projects. Ongoing services include liaison with governmental and educational agencies, public information programs, conferences, data collection efforts in support of a membership roster, and numerous publications. Special projects in recent years have been in such areas as the implementation of new occupational educational programs, the role of the humanities in community college education, education-work councils, programs for older Americans, community education, women's opportunities, etc. Historically, the Association has been concerned with establishing a favorable environment for the acceptance of two-year colleges as significant contributors to the education community and with providing an information exchange for its members. While the Board of Directors is principally composed of institutional representatives, membership on the Board has been expanded to include representatives of special interest groups on a rotating basis. The Council on Occupational Education is one such group. How effective their voice is must be judged in terms of the Board's willingness to undertake a study the magnitude of this one.

The American Vocational Association, founded in 1917, represents a different cadre of people. Its membership is composed of vocational educators and administrators at the local, state, and federal level. While its Board of Directors advises on many of the same issues as those imposed upon the AACJC Board, its populist character and sensitivity to political nuances has made it more responsive to the needs of established interest groups such as the state directors, those representing vocational divisions (e.g., trade and industry) and, perhaps most importantly, people employed at the secondary school level. Its Executive Director over the years has enjoyed an enviable record of longevity. The president of the Association is elected to serve each year. It, too, offers various services to its members, such as publications, government liaisons, and the sponsorship of voluntary task forces.

Both Association heads have given unstintingly of their time and support to the project. Members of the Boards of both Associations have also expressed continuing interest in The Joint Study and have given almost unanimous support to goals and purposes of the study. In the past, however, both Associations have disagreed on needed federal legislation or on the wording of that legislation. It was this conflict that led, in part, to the legislative strictures described in Chapter 2. Resolving those disagreements was in no small manner the motivation for getting together on this study.

Sensing an important merger of interests on the part of two large national associations, the U. S. Office of Education willingly funded the current study with the admonition that the recommendations of the study should identify policies and practices that facilitate or impede cooperation among community colleges, post-secondary area vocational schools, proprietary schools, and other local institutions or agencies engaged in vocational education. They insisted that all community resources be they industry-based training programs or public institutions be inventoried in the process.*

The objectives of the study were to:

1. Identify policies and procedures that facilitate or impede cooperation.
2. Develop recommendations for consideration at the federal, state and local levels that would promote cooperative working relationships.
3. Disseminate widely the findings and recommendations of the study through a series of regional conferences, reports, articles, and a national conference.
4. Establish a mechanism for continued cooperation between AACJC and AVA.

The Joint Study staff was appointed in December, 1976 with its headquarters at the AACJC office in Washington, D. C. A National Advisory Council (for a listing of the members of the Council, see Appendix B) jointly appointed by AACJC and AVA, was established in January, 1977 to advise the project director and staff on the scope and strategy to be employed in carrying out the study. While it was not envisioned at the time of the invitation to join the Council, most of the Council members later became involved in conducting site visitations. In addition, most were called upon to participate as discussion leaders and presenters at the regional conferences and the national conference. Finally, each member has willingly given of his or her time to critique this final report and the recommendations emerging from the overall study.

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*CETA prime sponsors and skill centers were not included in the survey because of their ancillary status with regard to vocational education. This decision was endorsed by the National Advisory Council of the Joint Study.

Between December, 1976 and the latter part of February, 1977, when the first National Advisory Council was convened, an indepth review of the literature was conducted, several criteria for judging successful articulation programs developed, and the cooperation of state directors of community colleges and of vocational education, and the executive secretaries of State Advisory Councils on Vocational Education were solicited. Announcements and presentations at various national conferences and articles in the publications of the two Associations helped in the achievement of that purpose.

Among the groups to whom announcements were sent or presentations made were the Council for Occupational Education (AACJC), the Committee for Postsecondary Education (AVA), the two Boards of the two Associations, the American Technical Education Association, the National Advisory Council on Vocational Education, State Directors Associations of Vocational Education and of Community Colleges, the Educational Commission of the States, the National Association of Trade and Technical Schools, the Chief State School Officers Association, and the State Higher Education Officers Associations.

At the first National Advisory Committee meeting in February, 1977 some 16 issues were set forth by members of the committee as topics worthy of attention. Each member was then ask to rank the issue discussed in terms of their significance as areas warranting further investigation. The following issues received top ranking:

A. Functional Structural Issues. By initially arraying the needs to be served in a community against the various delivery systems and structures provided to serve those needs, the Joint Study Team could determine what programs were being offered as well as where gaps and overlaps existed. Each delivery system or institution would need to be contacted in a given region or community in order to insure that a complete inventory has been carried out.

B. Articulation of National and State Manpower Programs With Vocational Education. A number of questions were raised but no strategy formulated for answering this issue. What are the emerging delivery systems and how do they potentially overlap already established programs? What is the role of federal agencies in encouraging or promoting fragmented services, some for the poor, some for children of the middle class, and some for members of higher income families? Emerging from this discussion was the recommendation that the focus of the Joint Study should be on AACJC/AVA related programs and activities and not on all federally sponsored manpower programs such as those originating in the Department of Labor, those in the Department of Commerce, and other HEW supported programs such as those designed for the vocationally handicapped or to support cooperative work-study programs, etc. By focusing attention on those activities and programs over which vocational educators have some control, it was felt that the Joint Study Team would be able to come up with recommendations that could be acted upon by the appropriate decision makers.

C. AACJC and AVA Image. One Advisory Council member felt strongly that the study should attempt to make an assessment of how both Associations are perceived by people in the field. What are their feelings concerning the goals or purposes of the two Associations? How will the two Associations measure up in terms of representation? According to a recent survey which this Council member had conducted, approximately 60 percent of the technical institutes in the country had institutional membership in AACJC while 95 percent of the public community colleges do so. Conversely, only three percent of the membership of AVA were people who operate at the postsecondary level. Only seven percent of the Board of Directors of AACJC were from technical institutes whil such institutions make up 14 percent of the total institutional membership of the Association. It was this person's feeling that a survey of local members of one or both Associations and their perceptions would help both Associations in their future recruitment programs.

This same Advisory Council member commented that Congress' concern was not so much with how well the needs of young adults and high school graduates were being served; they were convinced of that. They expressed frustration, however, with their inability to get a handle on who was doing what at the postsecondary level. The parochialism reflected in the testimony of the two Associations' representatives and the inadequacy of the data used to present their cases left some member of Congress with the attitude that both Associations should reconcile their differences before appearing to testify.

D. Identification of Exemplary Practices. The principal concern of this issue was one of identifying what criteria or practices should be accepted as indicative of successful articulation of programs. "Practice" was suggested as a concept that more accurately reflects what local practitioners do in order to achieve successful articulation. "Programs," it was felt, often carry with it the connotation that the practitioner should describe what it is they would like to do doing rather than what they are actually doing. The term "practices" was broad enough to encompass both policies and procedures employed. Use of the term "practices" would enable the interviewers to assess the quality of relationships among and between local institutions as well as what it is that practitioners do in achieving articulation.

A number of practices illustrative of successful articulation efforts were reviewed by the Council. These were then refined further for incorporation into letters to be sent to state level administrators. Each letter (for copies of the letters sent, see Appendix C) would ask the respondent to nominate "one or more local communities in your state where you feel successful collaboration between area vocational schools, community colleges, proprietary schools, etc. has been achieved." the suggested criteria covered in the letter were:

1. The existence of a written agreement between two or more local institutions stating how such institutions will collaborate in their effort to provide support for post-secondary vocational education.
2. The use of criterion referenced tests or other systematic assessment procedures making it possible to offer course credit to students who have already acquired specific knowledge and skills in a given area of vocational education.
3. Closely related to giving credit for already acquired knowledge and skills is the willingness of local institutions to accept the transfer of credits from another institution.
4. The use of joint follow-up surveys to ascertain how well students in those occupations for which they have been trained are doing.
5. Existence of joint planning committees and joint membership in advisory committees.
6. The provision of individual study opportunities and flexibly scheduled courses giving students access to programs when convenient for them.
7. Jointly sponsored community needs surveys.
8. Procedures where key staff are provided release time to participate in joint planning sessions.
9. Shared counseling and job placement programs.
10. Budget review procedures giving key administrators the opportunity to review each other's budget requests.

Respondents were asked to apply these criteria "and other criteria" they felt would serve as useful guidelines in their selection process. Based on responses from the field, the wording of several criteria were modified slightly. All criteria, including their suggested rewording, were then incorporated into the interview schedules for use by the site visitation teams (see Appendix D).

SOLICITATION OF NOMINATIONS

In considering how best to solicit nominations of successful practices, the Council suggested that nominations of exemplary models should initially be solicited from state officials and then a second wave of contacts initiated after a sample of local communities has been selected. By giving states the opportunity to nominate local institutions, we would be in a better position to judge what states view as "successful" practices. Informed state officials, it was suggested, should be given a predetermined set of criteria to work from, but should be allowed to add to or modify the criteria as they saw fit.

While it was agreed that state level officials were probably the best source of nominations, some of the Council members urged us to consider "self nominations" as well. Because of the widespread publicity provided at the time the project was launched, a number of local communities and institutional representatives would probably initiate contact with us. Nominations received from other than state officials were therefore included in the sites to be selected for closer investigation.

Letters to state directors of vocational education, of community colleges, and to state executive secretaries of advisory councils on vocational education were composed (see Appendix C) and distributed during the latter part of May, 1977.

Solicitation letters were mailed during the last week of May, 1977 and a response cutoff date established for July 1, 1977. Letters to the state directors of vocactional education were signed by the then Executive Director of the AVA, Lowell Burkett. Letters to state directors of community colleges were signed by Edmund J. Gleazer, Jr., President of AACJC. Executive secretaries of state advisory councils on vocational education were also contacted by means of a letter signed by the Joint Study project director. In all, 150 persons were contacted in this manner. The five U.S. territories, however, were not included in the solicitation because of the potential cost of site visitations to these remote locations.

Just prior to the mailing of the letters, editorials were written by the two Association heads and published in the relevant journal, e.g., The American Vocational Association, April 1977; and The Community and Junior College Journal, May 1977 (see Appendix E). Both statements strongly endorsed the purposes of the project.

Overall 203 institutions were nominated as locations where successful articulation was taking place. Responses were received from 37 of the 50 states contacted (a 74 percent response rate). In 17 states (46 percent), only one of the three state officials contacted responded with one or more nominations. Two of the three officials responded in 15 states (40 percent). And in 5 states (14 percent), all three officials responded. Not all respondents in each state nominated the same communities or institutions. Of the 203 institutions or organizations identified, many had bilateral

TABLE I

NUMBER OF INSTITUTIONS NOMINATED BY TYPE OF INSTITUTION

	N	%
COMMUNITY COLLEGES	120	59
AREA VOCATIONAL SCHOOLS	66	33
FOUR-YEAR COLLEGES	10	5
MISCELLANEOUS*	7	3
TOTALS	203	100

* Proprietary schools, industrial firms, hospitals.

agreements with nereby institutions (usually named as well). Only eight of the nominations originated independently of the three state officials contacted in each state.

Table 1 shows that of the 203 institutions*, 120 or 59 percent were public community colleges, 66 or 33 percent were technical institutes, career centers or area vocational schools, 10 or 5 percent were four-year postsecondary institutions, and the remainder fell into a miscellaneous category. In this last category, several proprietory schools and one industrial firm were nominated. Most of the link-ups were bilateral in nature while only a few were considered to be multilaterial. Not shown in Table 1 were the high schools mentioned as linking with nereby community colleges or area vocational schools. Also excluded from the table were those consortia organized around a single occupational program.

SITE SELECTION PROCEDURES

Following the receipt of the nominations, each institution or organization nominated was matched with those institutions with which it had bilateral or multilateral links. Since community or junior colleges received the largest number of nominations, they became the principal sampling unit. Where an area vocational school or other type of educational institution or organization was the only institution nominated in a given region or sector of a state, it became the sampling unit. The distribution of nominated institutions by census region is presented in Table 2.

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*Five community or technical colleges, two area vocational schools, and one branch campus of a four-year college were nominated for consideration by other than state officials.

In order to insure a good regional mix of sites, a minimum of two sites were selected from each region, irrespective of the total number of sites nominated in that region. In order to keep the number of site visitations at a manageable level, no more than three sites were chosen from the census regions where a higher number of institutions has been nominated.

In addition to geographic location and number of sites nominated by census areas, eleven other variables were chosen as selection criteria because they were likely to influence the articulation process. Each of these variables is described in Table 3.

TABLE 2

NUMBER OF INSTITUTIONS NOMINATED BY CENSUS REGION

State	No. by State	No. by Region	Sample by State
New England		15	
Maine	6		1
New Hampshire	2		
Vermont	-		
Massachusetts	3		
Rhode Island	-		
Connecticut	4		1
Middle Atlantic		29	
New York	11		1
New Jersey	10		1
Pennsylvania	8		1
East North Central		22	
Ohio	8		
Indiana	-		
Illinois	5		1
Michigan	8		1
Wisconsin	1		1
West North Central		37	
Minnesota	3		
Iowa	3		1
Missouri	10		1
North Dakota	-		
South Dakota	1		
Nebraska	2		
Kansas	18		1
South Atlantic			
Delaware	-	36	
Maryland	-		
Virginia	2		
West Virginia	6		
North Carolina	1		
South Carolina	12		1
Georgia	11		1
Florida	4		1

TABLE 2 (cont.)

State	No. by State	No. by Region	Sample by State
East South Central		12	
Kentucky	6		1
Tennessee	1		
Alabama	2		
Mississippi	3		1
West South Central		14	
Arkansas	2		1
Louisiana	2		
Oklahoma	2		
Texas	8		1
Mountain		17	
Montana	-		
Idaho	-		
Wyoming	1		
Colorado	6		
New Mexico	-		
Arizona	1		
Utah	4		1
Nevada	5		1
Pacific		21	
Washington	3		1
Oregon	4		
California	14		1
Alaska	-		
Hawaii	-		

TABLE 3

CRITICAL VARIABLES CONSIDERED IN SELECTION OF SAMPLE SITES

1. Community Type: a. Urban, within SMSA (13); b. Suburban, outside of -- but adjacent to -- SMSA (11); c. Independent city, outside and nonadjacent to SMSA with a population greater then 10,000 (5); d. Rural, outside and nonadjacent to SMSA with a population less than 10,000 (3).

2. Size of Community: minimum, 7,100; maximum, 1,157,000.

3. Size of Institution: a. 999 FTE students or less (4); b. 1,000-1,999 FTE students (5); c. 2,000-2,999 FTE students (4); d. 3,000-4,999 FTE students (1); f. 9,000-14,999 FTE students (2); g. 15,000 FTE students or more (3).

4. Governance Structure: a. State (6); b. Local (14); c. Private (2).

5. State Board Responsibility: a. Governing (3); b. Governing/Coordinating (4); c. Coordinating (13); 2 Private.

6. State Board Organizational Type: a. Board responsible for community colleges only (7); b. Board responsible for all higher education (5); c. Board responsible for university system (2); d. Board responsible for all levels of education (6); (2 private).

7. Financial Support: a. State only (8); b. Combination state and local (12) c. Local only (0); (2 private).

8. Age of Institution: a. Founded 1955 or earlier (7); b. Founded 1956-65 (5); c. Founded 1966-70 (8); d. Founded 1971-77 (2).

9. Percent of Area's Taxes Devoted to Education: a. 20%-29% (0); b. 30%-39% (1); c. 40%-49% (4); d. 50%-59% (11); e. 60¢-69% (4); f. 70%-79% (2).

10. Community Average Annual Per-Capital Income: a. $3,000-$3,999 (9); b. $4,000-$4,999 (6); c. $5,000-$5,999 (7); d. $6,000 or greater (0).

11. Growth Rate of Region: a.-15% to -5% (1); b. -4.9% to 0 (7); c 0 to +4.9% (6); d. +5% to +15% (8).

*The numbers in parentheses show the number of sites adhering to the particular characteristic.

Definitions of each variable considered in the selection process are as follows:

1. Community Type. A. Urban: A district within a Standard Metropolitan Statistical Area (SMSA); B. Suburban: A district outside of the SMSA but in close proximity to it--a district within "commuting" distance of the SMSA; C. Independent City: A district in a city a considerable distance from an SMSA with a population of 1,000 to 49,000; D. Rural: A district in an area with a population less than 10,000 and well removed from the nearest SMSA--corresponds to the traditional definition of a rural school district. The rationale for including community type and density was likely to shape the nature of the articulation agreement. The sample contained 13 urban communities.
2. Size of Community. Variable closely related to type of community is the community's population. To control for this variable, the sample contained communities that ranged in popluation from a low of 7,100 (St. George, Utah) to a high of 1,200,000 (Milwaukee, Wisconsin). Within this population range, the other twenty sites were spread fairly evenly.
3. Size of Institution. The schools were grouped by numbers of full-time equivalent (FTE) students into seven categories:

   a. 999 FTE students or less; b. 1,000-1,999 FTE students;
   c. 5,000-8,999 FTE students; f. 9,000-14,999 FTE students;
   g. 15,000 FTE students or more. Most institutions reported a sizeable number of part-time students. The number of part-time students was divided by four and then added to the total number of full-time students enrolled at the institution to yield the FTE number.

The size of an institution can be an important variable influencing articulation. For example, smaller schools may not possess the staff or resources to be able to offer up-to-date courses and services, and may thus have a greater motivation to actively strive for effective articulation. To explore this hypothesis, care was taken to ensure that schools of all sizes were included in this study. The number of FTE students ranged from a low of 52 at the Gradwohl School of Laboratory Technique to a high of 62,705 enrolled in the Milwaukee Area Technical College. The sizes of the schools in the sample were distributed evenly among the seven groups identified above.

4. Governance Structure. A. State, B. Local, C. Private. The governance of community colleges and vocational schools may be entered either at the state or the local level. It is hypothesized that those institutions with local governance structure are more likely to achieve successful articulation than those with state governance structures, seven fell under the state structure; 14 had local governance structures; and one was a private institution.

5. State Board Responsibility. A. Governing, B. Governing/Coordinating, c. Coordinating, D. Private. State boards for community colleges differ in their authority and responsibility. As Wattenbarger and Sakaguchi report (5), states could be divided into three groups according to their responsibility for the community colleges. Some states actually "govern" the community colleges and area vocational schools, some maintain a "governing-coordinating" role, while the largest number of states maintain a purely coordinating role. It has been hypthesized that state boards with authority to govern would have different interests than the state boards charged only with "coordination." Here we wished to determine whether the type of State Board responsibility has any

impact on the success of articulation efforts within the state. Three of the sites in the sample are located in states within which the boards have governing authority, four sites are located in states within which the boards have governing/coordinating authority, and 13 sites are located in states within which boards have coordinating authority. One site involved private schools and is unaffected by the type of state board responsibility.

6. State Board Organizational Type. Wattenbarger and Sakaguchi (5) also classified State Boards according to their organizational type. The four types identified are: a. State board for community colleges only; b. state board for all higher education; c. university board responsible also for community colleges; and d. state board responsible for all public education. This variable was included here to determine whether the organizational type of state board may have an influence on the success of articulation programs within the state. Seven sites are located within states with the first type of board; seven sites are located within states with the second type of board; two sites have university systems which oversee community colleges and five sites are located within states with the fourth type of board. One site involves a private school which was unaffected by the organizational type of state board.

7. Financial Support. Financial support for community colleges or area vocational schools can be provided exclusively by the state or by a combination of both state and local revenues. None of the schools involved in the study were supported entirely by local revenues, although one was a private school. To examine the impact which the pattern of financial support may have on articulation, eight sites were selected

within states where financial support for community colleges is derived exclusively from state funds and 13 sites were selected in states where financial support is derived from a combination of state and local funds.

8. Age of the Institution. The age of the community college or vocational school being analyzed is important to know. Is there a correlation between the age of the school and the success of its articulation efforts? On the one hand, younger institutions may be more innovative and dynamic in seeking meaningful ariculation. On the other hand, older schools may have found from experience how necessary and important articulation agreements are. To examine these and related issues care was taken to ensure that a mix of both newer and older institutions were included in the sample. Seven schools in the sample were founded in 1955 or earlier; five schools were founded between 1956 and 1965, eight schools were founded between 1966 and 1970, and two schools were founded between 1971 and 1977.

9. Percent of Area's Taxes Devoted to Education. The proportion of an area's taxes devoted to education may be a good predictor of successful articulation efforts. Other things being equal, one would expect to find more effective articulation efforts in those areas that devote larger proportions of local tax revenues to education. One of the schools in this study was located in an area where between 30 percent and 39 percent of local tax revenues were devoted to education; four schools were located in areas where between 40 percent and 49 percent of local tax revenues were devoted to education; eleven schools were located in areas where between 50 percent and 59 percent of local tax revenues were devoted to education; four schools were located in areas where between 60 percent and 69 percent of local taxes were devoted to education, and two schools were

located in areas where between 70 percent and 79 percent of local taxes were devoted to education. These data were obtained from the 1970 Census.

10. Community Average Annual Per Capita Income. It is expected that more affluent regions will be those with the more successful articulation efforts. Nine sites were locked in regions where the annual per capita income was between $3,000 and $3,900; six sites were located in regions where the annual per capita income was between $4,000 and $4,900; seven sites were located in regions where the per capita was between $5,000 and $5,900. These data were also obtained from the 1970 Census.

11. Growth Rate of the Region. The rate at which a particular region is growing--here measured by net population change between 1970 and 1975--can have a significant impact on articulation programs. Once again, however, from the literature there is little consensus as to the likely relationship between regional growth and articulation. It has been hypothesized that pressures of meaningful articulation are especially acute in declining or stagnant regions, where funds to maintain even existing educational programs or services may not be available. Conversely, it can be hypothesized that regions experiencing rapid economic growth offer the best opportunities for successful articulation efforts. The sites analyzed in this study range from those experiencing rapid outmigration to those which have been growing rapidly. Of the 22 sites in the study, one experienced a declining rate of growth between 15 percent and 5 percent; seven experienced growth rates between 4.9 percent and 0; six experienced growth rates between 0 and 4.9 percent and eight experienced growth rates between 5 percent and 15 percent.

To briefly summarize the methodolgy employed, the sample of sites selected for visitation was purposely drawn; even the universe from which it was drawn was not truly representative of all community colleges and area vocational schools. Rather, it was an attempt to insure that the sample of site nominations suggested by state officials would take into account geographical location and all 11 other critical variables. In drawing the sample of 22 sites, the 203 nominations received were arranged by state and by type of institution or organization nominated. Those involved in bilateral or multilateral articulation agreements were then inventoried, reducing the number of institutions to be sampled to 112 locations. Following this analysis, the new locations were grouped by the 9 regions and arrayed against the 11 critical variable described above. An 11 by 112 data matrix was then constructed in order to assign each of the sites to a particular cell within the matrix. The next step in the sampling process consisted of drawing no less than two and no more than three sites from each of the nine census regions according to the number of locations falling into each region. The 11 critical variables thought to influence the articulation process were also weighed as each of the site selections were made. Finally, the 22 sites selected were analyzed to ensure that they did represent a satisfactory overall mix of the relevant variables when compared against the distribution of characteristics of communities in which the various nominated institutions were located (See Table 4).

TABLE 4

NUMBER OF SITES NOMINATED BY CENSUS REGION

SITES SELECTED	NO. OF LOCATIONS NOMINATED
NEW ENGLAND	9
Manchester Community College Manchester, Connecticut	
Kenebec Valley Vocational Technical Institute Waterville, Main	
MIDDLE ATLANTIC	15
Fulton-Montgomery Community College Johnstown, New York	
Somerset County College Somerville, New Jersey	
Williamsport Area Community College Williamsport, Pennsylvania	
EAST NORTH CENTRAL	20
Milwaukee Area Technical College Milwaukee, Wisconsin	
John Wood Community College Quincy, Illinois	
Macomb Community College Warren, Michigan	
WEST NORTH CENTRAL	20
Coffeyville Area Vocational Technical Institute Coffeyville, Kansas	
Iowa Central Community College Fort Dodge, Iowa	
Gradwohl School of Labor' Technology St. Louis, Missouri	

TABLE 4 (CONT'D)

SITES SELECTED	NO. OF LOCATIONS NOMINATED
WEST SOUTH CENTRAL	6
Tarrant City Community College Fort Worth, Texas	
Garland County Community College Hot Springs, Arkansas	
MOUNTAIN STATES	11
Dixie College St. George, Utah	
Yavapai College Prescott, Arizona	
PACIFIC AREA	4
Bellevue Community College Bellevue, Washington	
Peralta Community College District Oakland, California	
SOUTH ATLANTIC	21
Tri-County Technical College Pendleton, South Carolina	
Floyd Junior College Rome, Georgia	
Florida Junior College Jacksonville, Florida	
EAST SOUTH CENTRAL	6
Mississippi Gulf Coast Junior College Perkinson, Mississippi	
Madisonville Community College Madisonville, Kentucky	

DATA GATHERING PROCEDURES

The strategy chosen for conducting the data gathering phase of the project was that of a series of indepth interviews with the administrators, faculty, community representatives, and students in communities where successful articulation was taking place. Because of the exploratory nature of the study and the desire to present a series of case studies depicting successful programs, qualitative, indepth analysis procedure involving site visits was adopted. This approach while probably not the most preferred research strategy in educational circles today, was justified on the basis that the study team needed to gain a first-hand understanding of the play of forces in a given community and a description of the situation as seen by the participants. While some members of the National Advisory Council urged the study team to consider identifying matching communities where unsuccessful or little articulation was being attempted, the limited budget and relatively brief time period available for site visitations militated against such a strategy. Precedence for the approach adopted could be found in earlier anthropologically-oriented efforts such as those reported by Becker (1), Rist (3), and Shapiro (4).

Rist has commented that "qualitative research is predicated upon the assumption that this method of 'inner understanding' enables a comprehension of human behavior in greater depth than is possible from the study of surface behavior, the focus of quantitative methodologies." (4). If theory begins with an extrapolation from grounded events, then our understanding of the patterns of human interactions can be achieved more readily through looking for the broader patterns that emerge from such observations across communities. By viewing the world through the perspective of the people interviewed, it was hoped that the reality and the meaning or understanding of their behavior could be more readily and validly achieved.

Conducting the study required that successful collaborative efforts be initially identified and then followed up with site visitations of all nominations or a sampling thereof. Through the use of structured interviews, relevant data would be obtained and arrayed against several criteria established as the standard against which collaborative efforts could be judged.

Once having determined the site locations to be visited, the project director organized a master schedule of site visits extending from mid-July through the end of September, 1977. Appendix F presents a master list of site locations, the names of the site visitation team members, and the dates on which the visitations occurred. In almost every instance, a two-person site visitation team spent approximately two days at each location interviewing a cross-section of administrators, faculty, students, and community representatives. In 15 of the 22 site visits, the Joint Study project director served as team leader. In the remaining seven, one of the two interviewers present had previously worked with the project director in one or more previous visits. Each site visitation team member was given an orientation to the interview schedule to be used (see Appendix D for a copy of the orientation guide), and when involved in interviewing for the first time, was invited to sit in with the team leader during the initial interviews. Over the course of two days, the site visitation team would jointly or separately interview 20 to 25 people. Appendix D presents the structured interview schedule and identifies the blocks of questions asked of various classifications of interviewers (presidents, director, business managers, etc.).

An attempt was made to meet with the following persons at each institution visited: 1. The President or Director of the institution. 2. The Director of Occupational Education or equivalent. 3. The Director of Placement Services and of the Counseling Office. In addition, a cross-section of faculty, students, and community representatives (often members of advisory committees) were interviewed, usually in groups of two or three.

In arranging for the site visitations, the project director would call three or four weeks in advance and set up a mutually convenient visitation date. He would then mail to the president or director of the institution involved a packet of materials containing a description of the project and a copy of the interview schedule. He would ask the chief administrator of the institution to be visited if that person would appoint someone on his immediate staff to serve as coordinator and, when necessary, coordinate the schedule of interviews with the schedule being developed at the other institutions with whom they had articulation links in the community. In instances where certain background information was not available at the time of the visit, the site-based coordinator took on the responsibility of forwarding such information to the study headquarters.

In all, over 300 interviews were conducted, considerable illustrative materials gathered (including articulation agreements), and interview results recorded. Of the 22 sites visited, nine locations involving nine community colleges and five area vocational schools were found to be practicing successful articulation when judged by the ten criteria initially formulated by the National Advisory Council. These communities were: Prescott, Arizona; Rome, Georgia; Fort Dodge, Iowa; Battlecreek, Michigan; Williamsport, Pennsylvania; Johnstown, New York; Fort Worth, Texas; Bellevue, Washington, and Milwaukee, Wisconsin. Using the interview results and other data gathered during the two-day site visits, together with follow-up telephone interviews, five case studies were then prepared covering five of the nine locations. These are presented in the next chapter. The remaining locations should not be viewed as having serious shortcomings insofar as articulation was concerned but each lacked one or more practices which would have otherwise qualified them as an exemplary program. These 13 together with the four remaining exemplary locations serve as sources for selected illustrations of articulation practices presented in the second part of the next chapter. People to contact for those interested in additional information are presented in Appendix G.

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CHAPTER 6

CASE STUDIES IN ARTICULATION

To dramatize what may otherwise seem to be faceless beneficiaries of collaborative efforts between local educational institutions, consider the two individuals described below. Both, at different stages of their living--working cycles, are currently involved in postsecondary occupational education programs:

> George is a recent high school student who has not made up his mind on what he intends to do with his life. To date, he has given very little thought to the problem and, if left to his own devices, will probably postpone making a career commitment as long as possible. He has enrolled in a transfer program at the local community college. After spending several months in that academic program, he has discovered that he is not sure that he wants to transfer to a four-year institution. Having heard through the grapevine that there are a number of good job opportunities in the health services field, he decides to try for an Associate Degree in Nursing. He had worked the previous summer as a hospital orderly and would like to get some credit for that prior experience. During high school he took a biology course and a course in physical hygiene and did well in both.
>
> Unfortunately, George's community college counselor has no way of judging his previous experience and therefore requires that he take a refresher course to meet the prerequisites

for study in his newly chosen field. Through his counselor, George also learns that some already completed college level academic courses cannot be applied toward an AA degree in the health services field. Apparently, there is no way in which he can accelerate his acquisition of an AA degree.

Beatrice is a housewife who wants to qualify for a job outside of her home. Her children are old enough to be enrolled in school and she hopes to find part-time work. She stops to chat with a counselor at the local CETA headquarters. They recommend her for a job at a nearby company. She enjoys the work but soon discovers that she could advance to a higher paying position if she took additional training. She decides to enroll in a nearby Vocational Training Center only to discover that she must wait five months until the course she wants to take is offered again.

Although the problems George and Beatrice face are not uncommon, such frustrations are not necessary. Many communities have successfully overcome these and other barriers to continuing education, often as a direct result of local efforts to articulate their occupational programs. In one community, a community college, an area vocational center and a high school work together to offer students help in career decision making. In another, collaborative efforts are directed toward identifying the needs and offering a continuous up-grading program for the employees of an expanding company. Why is it that some institutions can achieve articulation and others cannot? What are the ingredients of a successful articulation strategy? How various communities achieved their current status is a story worth relating. To tell fully each story could easily occupy many pages. This we will not do. However, the strategies and efforts required to achieve successful articulation can be summed up and made available to those interested in replicating these practices.

Earlier chapters identified factors thought to influence successful articulation. These factors included the real and perceived degree of interdependency of the institutions involved, the quality of community and institutional leadership, the clarity with which local institutions set forth their goals and the degree to which procedures have been systematized.

The five cases to be presented here were selected not only because of their outstanding articulation programs, but because they were representative of institutions located in communities of varying sizes and geographic locations. One of the two urban sites is a large urban center, Milwaukee, Wisconsin; while the other, Battle Creek, Michigan, is a comparatively small urban area. The third site, Johnstown, New York, is located in a rural area. A fourth site represents a suburban area, that of Bellevue, Washington. The fifth, Williamsport, Pennsylvania, is both rural and urban. In each of the case studies, five types if information will be covered. These are: 1) Relevant economic and demographic data; 2) the variety of educational institutions linked through articulation arrangements; 3) governance structure and funding patterns of the statewide vocational education system; 4) historical background; and 5) a description of the articulation program as it is currently practiced.

Following the presentation of the case studies, a brief description of selected exemplary practices found in the other 17 locations visited during the summer of 1977 will also be presented. These practices have been grouped under one or more of the ten criteria used initially for soliciting nominations from state administrators. Appendix G will provide the names and addresses of appropriate contacts for those wishing to explore further the policies and procedures briefly described.

ARTICULATION ACHIEVED: FIVE CASE STUDIES

It makes little sense for community institutions not to articulate their vocational education programs. However, the countervailing pressures to such cooperation are often overwhelming--given the barriers imposed by the subsystems making up our educational community, each with its own administrators, faculty, philosophy, curriculum and advisory bodies. For cooperative arrangements to work, these units must first recognize their common, but sometimes competing, interests and then acknowledge that cooperation must occur at the individual as well as the institutional level. Articulation agreements whether formal or informal are strengthened as the process gathers momentum and a solid base of achievement is built up. In the following cases, differing external circumstances led to the recognition of the need for articulation. The variables of size, wealth, tradition, geography, type of control and student needs had important effects on the level of success achieved. However, none of these factors was as significant as the other variables of leadership, degree of interdependency, and the clarity of goals.

In Bellevue, Washington, where cooperation at the curriculum development level has been in operation for only a relatively short time, the major incentive came from the state organization of local vocational educators; in Williamsport, Pennsylvania, the pattern of articulation is as old as the institution itself; in Johnstown, N.Y., institutional leaders began slowly opening up lines of communication and have now achieved multiple linkages. In Battle Creek, Michigan, articulation sprang from the community itself; and, finally, in Milwaukee, Wisconsin, where the nation's largest area vocational technical school is located, articulation has become a fine art due in part to the quality of leadership in the community and the integrated state system of education.

Bellevue - A Suburban Model

Bellevue Community College, (BCC), just over a decade old, serves a student population of more than 8,000 (3300 FTE, 4700 part-time).* Located east of Seattle, BCC is part of the 68,000 member community of Bellevue, a close suburb of Seattle with a long history of energetic educational leadership. Median family income stands at nearly $19,000 and 47 percent of the community's inhabitants have occupations that are professional, highly technical, managerial or administrative in nature.

As a part of the Seattle metropolitan area, Bellevue has been confronted with the dual problems of limited fiscal resources and an interest in modest growth. Pressured, in part, by cancellation of the Boeing SST project, the area has successfully diversified its economic interests since the early 1970's. Area educational funding has remained constant. In a state where local bond issues frequently are in trouble, Bellevue has lost only one bond issue in the past ten years, and that proved to be a short lived problem as it was passed on a subsequent referendum.

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*Full-time enrollment equals 10 or more credit hours

Governance. In Washington, there are two separate boards of governing vocational education under the coordinating direction of the State Commission on Vocational Education: 1) the Common School K-12 Education Board and 2) the State Board for Community College Education. Both commissioners and boards are appointed by the governor, and are responsible for planning and policy setting.

Regarding vocational education, the state government's major role has been to define the functions of the separate types of institutions offering vocational education. High schools offer traditionally comprehensive programs, both academic and vocational. Vocational-technical institutes are structured strictly along occupational lines and the state common school board insures that their offerings are functional, not comprehensive. The five institutes provide the link between secondary schools and occupations requiring vocational and technical training. The community colleges, on the other hand, have the dual responsibility of being comprehensive and responsive to special community training needs as well. In 1976, 46 percent of the enrollment in community colleges were vocational in nature. The state community college board coordinates, sets policy, and provides 80 percent of the operating budget for the 22 community college districts.

Budget monies are allocated on a cost-based program funding formula approach. Each district receives its allocation based on a percentage of the maximum support allowed by separate detailed budget categories, e.,g., instruction, libraries, student services, plant maintenance and operation, etc. Vocational education programs tend to receive more monies because of the lower student to staff ratios assigned to each 14 separate program classifications. No local contribution, other than student tuition and fees, is required.

Within these demarcations of responsibility, the state government provides an unusual element of flexibility which encourages articulation. There are no area residence requirements, aside from state residence, for admission to vocational-technical institutes and community colleges. The state, in fact, regularly publishes a state-wide course directory so that students may take advantage of course offerings throughout the state paying extra fees.

Curriculum Rationalization - The NEVAC Project. The Bellevue area has a strong tradition of local initiative which has contributed significantly to articulation. Acting on recommendations of the Washington Coucil of Local Administrators of Vocational Education's (WCLA) Sun Mountain Conference convened in May, 1975, Bellevue local institutional administrators sought to promote articulation efforts among the vocational education delivery systems throughout the area. Their goal was to explore ways in which students would be assisted in moving smoothly from one educational program to another.

Agreeing with WCLA's belief that local cooperation of vocational directors and teachers in participating institutions was bound to be more productive in the long run than programs imposed by state mandate, the state-funded Northeast Vocational Advisory Council (NEVAC), which serves the northeast portion of King County, decided to act on the Conference's recommendations. NEVAC is comprised of three community colleges, including BCC, ten public school districts and two vocational-technical institutes. With BCC taking a major leadership role, representatives from the school districts, vocational-technical institutes and community colleges undertook the task of developing a curriculum articulation model for the three types of institutions involved. To do this, they surveyed both enrollment and vocational offerings so they could identify and compare program profiles.*

In its second phase, the NEVAC study identified three subject areas for concentrated attention: business and office education; child development; and health occupations. In the third phase of the project, 24 instructors from these disciplines representing both secondary and post-secondary institutions gathered in half-day Saturday workshops to agree on parameters for the work and and develop sets of materials to take back to the schools.

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*After development of measures for full-time equivalent vocational enrollment in courses in each field and school, the relevant enrollments for articulation purposes were determined to be 24,200 at the high school level; 7,900 in vocational-technical schools; and 12,200 in community colleges.

Recognizing their differences, workshop participants sought common ground. The instructors specified career clusters which made up their curriculum areas and decided to develop job titles, career ladders and competency standards for each rung of each ladder in secretarial and clerical, nursing and health support, and child development careers.*

In the fourth phase, descriptive materials were produced and a matrix was designed for each career step which clearly outlined: the local schools that were offering the necessary training; the required credentials (state exams, licenses, academic or professional degrees); the form of training; a list of potential employers; competency and expectation check lists for each career ladder position; the teaching, if any, that the career person would have to do; the leadership skills required and other job responsibilities; and the individual's "team role" or place among fellow workers.

In addition, teacher participants received university credit for designing the assessment techniques, including sample test materials, which could be used to assure student attainment of competencies.

Curriculum Articulation. The next step in the NEVA study was to match the materials (career ladder expectations and competency check list, and assessment techniques) with course offerings in the various schools. Major benefits emerged:

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*The number of specific career was purposely limited to insure completion of course materials.

- The progression of competencies allowed for mapping of core courses so that it could be determined how well programs are outlined to meet career ladder requirements.
- The progression provided teachers with planning aids for their courses and an overview of each courses's place in the whole program.
- The materials served as counseling aids for students, parents and counselors offering a realistic picture of the career field's advantages, requirements, potential for advancement and disadvantages.

Further Benefits. Beyond the valuable curriculum and counseling materials prepared by the instructors and introduced into the schools, the joint study effort bore additional fruit. The formal and informal cooperation that existed in the past was strengthened at the instructor level. Although no exchange of teachers takes place, the schools now cooperate in inservice training for their instructors, and exchange visits to demonstrate new equipment and materials.

These cooperative efforts have, in turn, extended communication among vocational educators within the regional system. While advisory boards are still separate for each institution, WCLA representing all educational levels throughout the state gather five times a year. Local educators meet formally and informally at each education level and local program directors meet monthly to exchange ideas and recommendations.

Finally, there was a mutual agreement to continue the curriculum workshops for a second year. NEVAC administrators expanded the program to bring professionals from the occupational fields into the curriculum planning process. Besides validating the first set of career ladders, NEVAC plans to develop new ladders for data processing and accounting, as well as criteria for advanced placement in vocational courses.

Overview. The Bellevue experience identifies three elements common to successful articulation: clearly identified institutional goals; the capacity of leadership to deal with conflict, and the degree of structured cooperative effort within organizations. Program or curriculum content goals were clearly identified for the community colleges, the vocational technical institutes and the secondary schools in King County. Since areas of overlap were already identified, program leaders were free to initiate state and regonal meetings to discuss articulation and to follow through on recommendations resulting from these meetings.

As a result of local initiative, cooperative efforts by teachers from varying institutions was encouraged. Their work on skill sequencing, leading to standardization of instruction, admissions and transfer procedures then made it possible to rationalize educational offerings. Bellevue educators, beginning with a shared belief that the community's vocational needs and resource limitations were common ground for joint effort, have proven that cooperation can and does lead to improved educational opportunities for the student.

Williamsport's Pioneer Program

The only community college in the state to combine secondary and postsecondary services, the Williamsport Area Community College (WACC) serves as an outstanding example of a no-frills, minimally financed but highly successful articulation model. The college serve 20 public school districts in a largely rural 10 county region in north central Pennsylvania with a combined population of over 440,000. The region is slightly smaller than the state of New Jersey, and although 70 percent rural, nonetheless encompasses important industrial and business centers. Population is sparsely distributed in the forests and farmlands of the north and is more concentrated near Williamsport, one of the chief urban centers in the south-central area with a population of 40,000.

The economy of the region is based on a stable work force, a steady but modest growth rate, and a diversified industrial base including timber, agriculture, mining, manufacturing and service industries. Median family income, according to the 1970 census, averages $8,600, well below the national average of $9,867. Unemployment in 1977, however, was a relatively high eight percent. Area residents look to WACC as a bulwark against the tide of continuing unemployment.

The Williamsport Area Community College was established in 1965, but its response to vocational education needs dates back to 1919 when the School Board set up a training program for disabled servicemen of World War I. Vocational-technical education for adults was added to the program in 1920, and in 1941 the adult education program and the vocational high school program merged into the Williamsport Technical Institute (WTI). The Institute sponsored programs for training handicapped persons for war production in cooperation with local industry and the Pennsylvania Rehabilitation Service as early as 1942. It began a job training and safety program to meet the needs of rural electric cooperatives in the state in 1947; and pioneered the development of a vocational diagnostic program to provide counseling of rehabilitation clients. Among its satisfied sponsors were such groups as the United Mine Workers and the State Council for the Blind. By the 50's, the institute had earned an international reputation and became a popular training center for foreign educators who enrolled to study methods of vocational education.

Articulation Within a State System. As a result of the Pennsylvania Community College Act of 1968, WTI was given a new structure and renamed Williamsport Area Community College. In addition to the operation of its in-town campus, WACC was given the responsibility for maintaining facilities at the county airport for aviation courses, and establishing forestry and earth science courses elsewhere.

Governance. Under the provisions of the Pennsylvania Community College Act the State Board of Education has the authority to approve the establishment of a college. Colleges are, however, locally controlled by an independent board of trustees. They serve their own specific geographic regions.

WACC is presently sponsored by 20 school districts, and governed by a 15-member board of trustees, elected by the sponsor districts' Boards of Education. Sponsoring district residents receive the benefits of lower tuition and admission preference, and each sponsoring district is a direct shareholder in the College.

Financing. WACC's 1976-77 operating and capital budget was almost $7 million. Operating costs are shared equally by the sponsoring school districts, the state and the student. The 20 district sponsors may raise revenues through local taxes. The student portion is met through tuition fees.* Capital costs are split between the sponsors, assessed on relative market value, and the state. Like the majority of community colleges, WACC has suffered in recent years from a combination of inflation and flattening of enrollments. In 1976-77, the 20 sponsors were forced to increase their payments per full-time postsecondary student because the state had not raised its fixed allotment since 1974 resulting in a shortfall of nearly $100 per student. As in other areas, costs for the part-time secondary vocational-technical programs are allocated to participating districts on a per-pupil basis.

Budget. The preparation of WACC's budget is a three-tiered process. The business officially initially prepares the proposed budget for review by the deans and the president. The budget request is then reviewed by the college trustees and superintendents of sponsoring districts and presented for public consideration in regional budget review meetings. In the third cycle, the revised budget is presented as an appropriation request for consideration by the state legislature, along with requests from 13 other community colleges in the state.

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*Full-time postsecondary students from sponsor districts pay $320 per semester; non-sponsored students pay $720.

Student Population. WACC's 1977 student population includes 1,500 secondary vocational students; 3200 degree and certificate students (2600 full-time, 600 part-time) enrolled in day programs; and 3,000 non-credit community and continuing education students in night classes. Some 55 percent of the postsecondary students come from non-sponsoring districts in other parts of Pennsylvania, other states and some foreign countries. Forty-five percent come from the 10 counties in the region. Ninety-five percent are in career oriented programs, and only five percent are transfer oriented. Significantly, enrollment of the 3,000 non-credit community and continuing education students is not included in WACC's budget. Community education has a separate fund and operates on a self-sustaining basis with no financial support from sponsor districts or the state.

Articulation of Secondary Level Instructional Services. Pennsylvania requires all of its school districts to offer vocational programs. High schools in WACC's service area fulfill this requirement by contracting with WACC for services provided on its campus. This articulation program, while a logical extension of WACC's history of cooperative efforts, is unique in the state. The secondary vocational programs are arranged on a rotating schedule. High school students are bused to WACC where they attend classes for two or nine weeks. They then spend an equal amount of time at their home high schools. This structure allows inter-program scheduling and minimal duplication of facilities, equipment and programs, and has resulted in reduced operating costs. WACC's cost of $792 per year per secondary student is substantially below the average cost per pupil of $1,000 for vocational education throughout the state.

Vertical Articulation. The vertical movement of students from high schools to WACC is facilitated by the close link between the college and its sponsoring districts which have cooperated in establishing a preferential admissions policy. WACC's secondary students are given first priority in enrollment in WACC postsecondary programs; graduates of the secondary program can continue at WACC with advanced credit and earn an associate degree or certificate with only one additional year of school.

Interinstitutional Cooperation. Articulation is enhanced by the interinstitutional meetings of WACC officers, administrators and staff with various groups representing the public schools and postsecondary institutions in the area. WACC's dean of secondary instructional services chairs a professional advisory committee made up of local school district superintendents and other officials of the community college's district school systems to exchange information on vocational programs. An executive council composed of school board representatives for the 20 sponsoring districts and WACC board members oversees policy decisions.

Information and ideas are regularly exchanged among school and college counselors, principals and other staff. And a blue ribbon committee offers guidance on all vocational education offerings of the college. Separate advisory committees for each occupational program have also been established.

Postsecondary Articulation. Postsecondary instructional services involve many positive linkages with other institutions and with industry. WACC offers job training and job sharing as a postsecondary instructional service program in a variety of fields including business and computer sciences, transportation, building construction and earth sciences. Two students share one job and rotate instruction with work. Each instructor develops a set of learning objectives for individual students, coordinates with employers and is responsible for monitoring progress and upgrading performance.

Agreements with Other Postsecondary Institutions. Although most students at WACC do not transfer, those that do can do so with credit for their WACC courses because of formal articulation agreements with neighboring four year colleges. WACC students may also cross register to take courses at local colleges. When cross registration is equal, no fees are levied. In the field of cosmotology, WACC has arranged contracts with two private schools for the provision of cosmotology.

WACC, in turn, accepts course credits of students transferring from ofther area vocational-technical schools. Students can also gain credit for life or work experience if they pass a competency exam.

Community Continuing Education. WACC provides additional training for industry and the community through co-sponsored courses. In the past, the school has worked with Williamsport Hospital, Piper Aircraft, the State Department of Health and various unions to provide apprentice training. Last year, WACC offered 23 13-week programs in fire science, demonstrating new techniques for local fire departments.

Fees are shared by students and participating industries. The resulting low tuition is a strong incentive for student entry, and the programs benefit WACC by guaranteeing the fullest use of its facilities.

Survey. If employment is an articulation outcome measure, then one of WACC's outstanding statistics is its placement record. Most 1975 WACC graduates found employment despite a poor economy. Seventy-four percent indicated they were working in their fields of training, another nine percent transferred to other colleges to continue their education and 12 percent were employed in other fields. Only four percent were unemployed, and starting salaries averaged $7,500, comparing favorably with state and federal reports for starting salaries for entry level positions.

The above figures come from WACC's extensive follow-up of former students which not only charts former student progress, but serves as a guide for others entering occupational programs and as an evaluation tool for the college. Its survey covers statistical data on the number of students graduating in various programs, those employed in or out of their fields, employed out of state, unemployed, transferring to other colleges, and average starting salaries. A comparison of the college programs and the employment outlook for the next seven years (through 1985) is also reviewed, using Department of Labor data. The total information is assembled for easy reference and is distributed to high school counselors, division directors and the State Department of Education.

Placement. WACC's philosophy is that employment is directly related to WACC training, but placement cannot be left to chance. Graduates should be given the best employment assistance that time and staffing can provide. The College's placement services include a one hour career placement seminar given to students before they graduate. It includes writing a resume, letters, interview techniques and employment outlook by field. Sample resumes, letters and addresses of firms are some of the handouts included in the seminar package.

The placement director coordinates with 30 firms located within a 100-mile radius of the College. These firms visit the campus to recruit. An estimated 30 to 40 percent of the graduates find their first job through leads given them by the College and its faculty.

Overview. Williamsport Area Community College's successful articulation stems from its response to local training needs. The cooperation between WACC, district public secondary schools, industry, private proprietary schools, other colleges and hospitals ranges from formal written contracts to advisory committee participation and informal one-to-one contacts. WACC offers examples of both vertical and horizontal articulation, easing the progression of students through training into the work force and back again. Its administration is energetic and focused on substance rather than frills. Structurally, the financing and budgetary processes facilitate articulation because sponsors are involved in setting priorities and absorbing costs. In an atmosphere of lively and continual interaction, the lack of modern facilities and occasional funding problems have not deterred WACC from a consistent attack on articulation barriers.

Battle Creek - A Community Mandate

The Calhoun Area Vocational Center (CAVC) and the Kellogg Community College (KCC) face each other across a common pond in Battle Creek, Michigan. This physical proximity symbolizes the realization of a carefully prepared long range plan for vocational education articulation. In 1962, the area had no vocational center. This was of concern to business and industrial leaders and school officials who knew that high school graduation was the end of educational training for 70 percent of the area's youth. Though the community college founded in 1956 offered a limited number of occupational programs, its curriculum emphasized comprehensive studies rather than entry level skill training. Recognizing that a vocational center for the area would help supplement its offerings, KCC responded to the recommendations of a community sponsored Committee of 100 on vocational-technical training needs. The college conducted a feasibility study for area vocational service, and the resulting report, Patterns for Progress, offered a blueprint for cooperation.

The report concluded that an area vocational center could provide education for high school graduates or dropouts; quality occupational preparation for those still in high school; retraining; part-time supplementary training for employed persons; and counseling for youth and adults. Funds for the capital and operational expenses of the center, they felt, should be provided by the intermediate districts. Policies should be set by an advisory board composed of school administrators, members of boards of education, and appointed representatives of business, industry and labor. In 1967, the three-county Calhoun Intermediate District approved a program of secondary and postsecondary vocational education services and voted to support construction of a new facility. The Calhoun Area Vocational Center opened its doors in 1970.

Kellogg Community College and Calhoun Area Vocational Center serve a largely urban and industrial Michigan area with a population of 180,000. In 1970, the median family income was $8,946. Median years of education was 11.5.

The community college currently enrolls 4500 students. The Area Vocational Center has an enrollment of 1200 and serves the 15 area high schools in a three county area.

Since the opening of CAVC both institutions have operated under contractual agreement to share facilities and articulate programs. Administrators of both have agreed on the concept of career education and, with the approval and support of their respective boards, submitted a joint proposal to the Michigan Department of Education in 1972 for funding of a demonstration project on articulation of career development education.*

The joint articulation project was funded ($381,244) by the state department of education and the local community for three and a half years (1973-1976). The proposal identified significant barriers to articulation in career education as:

- A delivery system for education which was in reality a series of nearly autonomous subsystems including local K-12 districts, intermediate school districts, area vocational centers, adult and community education offices, community colleges, and colleges and universities;
- The teaching faculty in each of these subsystems which typically operated in isolation from one another;
- Vocational advisory committees that functioned independently of one another;
- Courses and curricula in the various subsystems which had not been coordinated into sequential experiences;
- Inadequate recognition given to prior learning gained outside the standard academic setting through work experience, military training programs, apprenticeships, and proprietary schools; and
- Inadequate attention to post-employment needs for job improvement and career changes.

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*In Michigan, the vocational-technical division of the state department of education advocates such articulation efforts. The state calls for written agreements between two or more educational agencies, the development of curriculum, criterion referenced tests, procedures for the recognition of knowledge and skills, joint planning committees, and time for key staff to participate in planning sessions.

Articulation. The progress in articulation made possible by the project was substantial. A plan was developed permitting students to continue college programs at the level they had reached in the Vocational Center programs. In addition, a policy was established for providing college credit for prior experience, whether acquired at the Vocational Center, in the military, on the job or in public or private school training.

KCC shared its learning resources center with the Area Vocational Center, making it possible for the center staff to produce instructional slides, filmstrips, videotapes and graphics without duplication of equipment and personnel. The college assumed primary responsibility for most postsecondary education programs and adult education: students enroll in the adult program through the College, pay their fees, then take courses at the Vocational Center. The Center in turn offers intensive training in a variety of occupations for adults from 4 to 10 P.M. Adults also attend classes during the day at CAVC whenever openings occur in the regular high school programs.

To prevent overlap, review committees were set up to examine performance objectives and develop learning modules. Formal agreements stated that students at the Vocational Center who reach certain performance levels do not have to repeat the work if they transferred to Kellogg Community College. These agreements now cover 16 different program areas and 200 learning modules that can be used by either institution.

KCC has produced curriculum guides which allow students to fill exact requirements of a university or college to which they wish to transfer. These guides are actually signed contracts with department heads of universities stipulating course requirements. KCC now has such contracts with 11 universities. This is believed to be the first time that transfer curriculum has been agreed upon in advance between a community college and a receiving institution in Michigan.

Cooperative Guidance Effort. CAVC's guidance staff and counselors at area high schools and Kellogg Community College have also developed a common career decision guide. The object was to provide information to students at the high school level as well as the postsecondary level. Assistance was sought from the Michigan Employment Commission and now all schools in the area have from one to three full-time placement persons available to help students find employment.

When it comes to program planning, representatives from all vocational education programs within the three-county area meet monthly to articulate their courses. This coordinating committee--made up of 20 members representing labor, business, vocational teachers, and student minorities--reviews current programs and approves new ones.

A policy advisory committee which includes representatives of the high school districts also meets monthly. Calhoun Area Vocational Center is represented in the Area School Masters Association, a group of school administrators who are concerned with a wide range of administrative matters, including vocational education. CAVC and KCC jointly sponsor vocational teacher training programs for their own staffs as well as for the local high schools.

Overview. Articulation at the two institutions seems to be proceeding effectively. In 1976, an outside three-member team evaluated the three and a half year old articulation project and noted as positive results the initiation of communication channels, development of innovative teaching methods, adoption of competency based education concepts shared use of personnel, equipment and materials, and cooperation in the placement of students. The community initiated push for cooperation has now been institutionalized.

KCC and CAVC are currently responding to the reactivated Committee of 100's recent needs assessment report. Concentrating on a new, non-traditional population, the institutions are cooperating in further articulation agreements for the benefit of the adult continuing education student.

Johnstown -- Articulation in Rural America

The small, ten thousand member community of Johnstown is a population center for three largely rural and sparsely populated counties near the foothills of the Adirondacks in New York State. Like many other rural areas, the counties surrounding Johnstown have suffered from high unemployment (11.5 percent in 1977) and an economic slump as major industries moved south, attracted by lower taxes. Median family income, ($9,300 in 1977) and median years of education (11.4 in 1977) are lower than the national average ($14,958 and 12.4 years respectively). Against this background, it is not surprising that 50 percent of the high school graduates attend some form of postsecondary educational training with the goal of improving their employment status. Students seeking such training are reaping the benefits of a mutually profitable arrangement between Fulton Montgomery Community College (FMCC) and the Board of Cooperative Education Services (BOCES) which serves high school districts in Hamilton, Fulton and Montgomery counties. To understand their cooperative efforts, it is necessary to understand each agency's part in New York State's educational structure.

Fulton Montgomery Community College. Fulton Montgomery Community College* was established in 1963 in Johnstown as one of thirty community colleges operating under the State University of New York (SUNY). In the New York system, community colleges are called "comprehensive" since they provide the first two years of a baccalaureate education for students wishing to transfer to four-year colleges; a variety of career programs teaching specific occupation skills particularly appropriate to local needs; and wide ranging continuing education programs. FMCC's governing structure, like that of the other 29 New York Community Colleges, starts with the SUNY Board of Trustees which approves the establishment of a community college, the academic curricula of all of the colleges, tuition and fee schedules, the budget submitted by the local boards, and the nominations of presidents. It is stipulated, however, that their mission is to be carried out without eroding the local control of the sponsoring agency (usually the county board) or college boards of trustees.

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*FMCC has a full-time enrollment of 1,094; part-time is 548 (non-credit, approximately 3,500) and an operating budget of $3.7+ million.

At the local level, FMCC is run by a nine member board of trustees chosen from citizens living in the sponsorship area, four appointed by the Governor and five by the local sponsor. A student-elected representative sits on the board as a 10th member. The local board appoints personnel, prepares the budgets, adopts the curriculum and establishes tuition and fees according to legal guidelines.

The sponsoring community contributes about 28% of FMCC's funding; state aid is approximately 37 percent and student revenue 31 percent.

New York State operates on a unit rate funding formula basis. Following the Pennsylvania principle of one-third each from state, locality, and tuition, a maximum of $518 per FTE is currently provided on a flat grant basis with additional money coming from the state for special programs.

The Board of Cooperative Education Services. Authorized by the state legislature in 1948 and originally established to provide small rural school districts with specialized services such as art, music, and driver education, BOCES has become the focal point for delivery of vocational education throughout the state. The BOCES exists independently of the school districts which it serves, provides only services requested by the district, and operates under its own board of education. Funding for requested services comes directly from the school districts, the state or the federal government with local school district expenditures reimbursed the following year through a state aid formula.

Marriage of Convenience. The common bond between these two very different educational structures was the growth of a mutual concern for effective delivery of vocational education. In the late 60's, Johnstown BOCES' district superintendent joined local school districts in encouraging FMCC (formerly limited to liberal arts curriculum) to expand its offerings to include technical education. The expansion served two purposes: It was a solution to the college's declining enrollments and it filled a local void in postsecondary training.

Even before this bond developed, a cooperative base had been established as early as 1964 when BOCES agreed to allow FMCC to use its data processing equipment and facilities to automate their student records and business operations. When FMCC later obtained a computer, they housed it in the BOCES facility and the cooperative venture was expanded. For a nominal fee, FMCC attained a fully operative data processing center and BOCES gained a fully equipped educational facility which was used to train secondary students in data processing.

Voluntary sharing agreements expanded in 1967 when FMCC agreed to extend to BOCES students access to personnel and facilities at its new Enrichment Center in order for them to carry out a project involving the development of curricular materials in local history and non-western cultures.

After the federal funding for the Enrichment Center expired in 1970, the success of the project stimulated the school districts to request BOCES to take over the operation of FMCC's Enrichment Center with local funding, expand the project, and become the inservice training unit for school districts. In 1975, the Enrichment Center was enlarged with continued local district funding. High school students, as an added plus, gained access to college resources for research projects.

When FMCC expanded its curriculum to include technical programs in 1972, BOCES offered technical assistance in setting up the programs and obtaining faculty. In addition, BOCES offered to share trade and technical shops. Formal agreements were made in 1974 which allowed the college to use BOCES facilities daily after the regular secondary day program was completed and prior to the adult evening programs. Service costs were allocated by an agreed formula, and purchase of equipment, replacement costs of equipment and supplies were shared by both agencies.

Curriculum Articulation. As early as 1970, BOCES joined FMCC in an effort to expand educational opportunities. The first target was graduate courses. In 1970, BOCES became the regional teacher certification office. Recognizing the hardship placed on local teachers, required to complete graduate courses in order to maintain certification, but living in an area lacking an accredited graduate program, BOCES supported FMCC's efforts to establish off-campus graduate courses in cooperation with 4 year institutions. The program has grown rapidly with five graduate schools now offering courses at FMCC year round.

From this first step of articulation, BOCES and FMCC moved to specific institutional arrangements. It had become apparent to both institutions that the BOCES program in data processing and advanced business machines was similar in scope to several of the business courses required by FMCC for an associate degree in business. It was also agreed that more high school students might be interested in attending a postsecondary institution if they could obtain college credit for work completed at BOCES during high school. A joint BOCES/FMCC staff meeting resulted in FMCC review of BOCES curriculum requirements to determine which training was equivalent to college courses. The college committee recommended that any student successfully completing the one year data processing or business machine program at BOCES should be granted 6 semester hours of college credit at FMCC, provided they received the recommendation of a BOCES instructor. Through this agreement, high school students were given, for the first time, advanced placement for regular high school courses. By 1977, the agreement had been extended to five other course areas.

Most recently BOCES and FMCC have extended cooperation to adult evening classes in the vocational technical area. Each agrees to a rational separation of responsibilities with the result that BOCES operates the shop, hands-on aspects, and FMCC generally runs the classroom-theory parts of the program.

Authorized by the state to provide apprentice training in trade and technical occupations, BOCES offers programs in electricity, auto mechanics, automotive body and fender repair, welding, graphic arts and building trades. With the enthusiastic support of trade unions, FMCC and BOCES have worked out a system whereby apprentices may complete their 144 hours of instruction at BOCES and have the appropriate credit transferred to FMCC for application toward requirements for completion of FMCC's Associate Degree program.

Future plans call for an articulated program in nursing education. Efforts are under way to establish transfer of partial credit from BOCES' LPN program to FMCC's registered nurse program so that with one additional year of collegiate study, a BOCES graduate could obtain the Associate Degree and licensure as a registered nurse.

Liaison By Committee. The joint committee structure is an ongoing feature of BOCES/FMCC's articulation process. In 1975, a permanent liaison committee consisting of the Comptroller, Dean of Students and Dean of Career Education from FMCC and the Director of Occupational Education and Assistant Superintendent for the BOCES was established. The committee meets on a monthly basis and covers a wide range of issues from budgeting, advanced placement through future planning. Recommendations are submitted to the heads of both institutions and then to the boards of trustees if required. It is felt that the use of the permanent liaison committees reduces problems and keeps crisis situations to a minimum. It is particularly important that the members of the committee are at the middle management level and carry both the authority and responsibility to settle the issues involved.

Joint Advisory Committees. Both the College and the BOCES had long established community-based craft advisory committees for each vocational program, and a general advisory committee for overall programs, but they operated on a separate basis. In 1977, the BOCES/FMCC liaison committee suggested the combination of craft committees and the establishment of a combined general advisory committee. At the present time, the appropriate committees are functioning well. In addition to furthering articulation progress, the joint committees have had a unique practical benefit. Since eligible membership for the committees is limited in this rural area, dual service makes more efficient use of a members' time' almost 100 percent attendance has resulted since members are required to attend only one meeting rather than two.

Overview. Starting with informal support arrangements in the 60's, BOCES and FMCC have established an elaborate community articulation network over the years. With advanced placement, apprentice training agreements, shared use of shop facilities and the Enrichment Center, the Johnstown model serves as an example of cost cutting without reduction in the quality of service.

Milwaukee's Area Technical College

The largest metropolitan area in Wisconsin, Milwaukee has fared better than much of the rest of the nation during the recent period of high unemployment. In December of 1976, the unemployment rate was 4.8 percent, well below the national figure of 7.8 percent. The median family income of $10,980 (according to the 1970 census) compared well with income levels across the state, as did its median education level of 12.1 years. The city has, however, had its share of pressing concerns. While low by national standards, the unemployment rate was substantially higher than this skilled and blue collar laboring city had experienced from 1970 through 1974.* In spite of a diverse economic base sustained by small engine and heavy machine manufacturing, brewing and printing, increasing industry demand for higher level job skills, and structural unemployment among the young and the 10 percent minority populations have posed problems for vocational educators.

Fortunately for its residents, Milwaukee has long had a deep belief in the value of vocational education, stemming from the cultural background of its heavily European immigrant population. As a result, the city supports, with substantial state cooperation, an all-inclusive institution devoted to vocational and technical entry skills, retraining, remedial or special education, transfer courses and continuing adult education for enrichment. The Milwaukee Area Technical College (MATC) serving 70,000 full- and part-time students, ages 16 to 80, through 185 programs and 2,300 individual courses, stands out as one of the finest articulation models in the nation.**

The Milwaukee Area Technical College District, one of 16 Districts in the Wisconsin system of Vocational, Technical and

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*As of 1976, 32 percent of the work force was employed by manufacturers and two-thirds of these were blue collar workers.

**F.T.E. is approximately 12,340. Less than 10 percent of the student population is (academically) transfer oriented.

Adult Education, is the smallest in geographical area but the most populous with over 1.2 million residents. What is now the Milwaukee Campus was supported by the City of Milwaukee until 1969, when the District concept was authorized by state law. MATC's District, composed of 21 high school districts in the area, includes comprehensive downtown Milwaukee campus and three smaller specialty campus centers in the south, west and north of the district which offer specialized programs in technical, industrial, agribusiness, health service, and business occupations.

Governance. Wisconsin's educational governance system has been a major factor in MATC's achievements since 1969. Unlike most other states, Wisconsin does not have a single community college system: it has two--the University of Wisconsin Center system, with 13 degree-granting centers and a statewide extension network, and the Vocational, Technical and Adult Education system (VTAE), made up of 16 VTAE districts which operate 36 technical institutes and 500 outreach centers. The state superintendent of schools, the president of the University of Wisconsin's Board of Regents, and the president of the State VTAE Board sit on the boards of both systems, insuring articulation at the highest level. The Wisconsin Board of Vocational, Technical and Adult Education governs the statewide system of vocational, technical and adult education and administers federal and state funds for vocational education. The individual schools are operated by the districts, autonomous municipal taxing units governed by locally appointed boards.

The statutory authorities vested in the state and district boards compliment one another. The state board has responsibility for the approval, development, maintenance and supervision of programs with occupational orientations above the secondary level and baccalaureate level, including adult education and apprentice training. The seven-member MATC district board (two employee representatives, two employer representatives, two at-large representatives, and a public school representative) approve the annual budget and set the tax rates and levies for the MATC District.

Local autonomy remains strong within this structure, since local districts provide 57 percent of the financial support for postsecondary vocational education in Wisconsin. 12 percent of the remaining funds comes from the federal government, 20 percent from the state, and the rest from fees and tuitions.

The rationalization of goals and programs provided by this system of separate but linked governing units has established a pervasive climate for cooperation.

Internal Articulation. MATC articulation with high schools and other postsecondary institutions has occured mainly in the areas of advanced placement, coordination of instructional programs and continuing education courses, and shared facilities.

However, all such cooperative arrangements have been aided by MATC's own integrated structure composed of four separate yet related campuses, each with its own specialties. The downtown Milwaukee campus is the most comprehensive. It offers classes for adult high school and general education programs among other programs. The North Campus at Mequon emphasizes agribusiness. South Campus Center in Oak Creek is largely devoted to district-wide industrial and technical programs, and the West Campus Center in West Allis specializes in small engine repair. Each of the facilities provides a business curriculum since the necessary equipment is not as expensive as other specialties and the need for business skills is evenly distributed throughout the district.

Major articulation benefits result from this use of a specialty campus approach. It promotes:

- more efficient and economical use of facilities, resources and personnel;
- the elimination of duplication in programs requiring expensive equipment;
- the integration of ethnic and minority groups because of assignment and scheduling of programs throughout the district;
- site and program flexibility because of decentralized, non-comprehensive locations.

Cooperation With High Schools. Articulation with high schools began with the formation of the MATC District in 1970 by the state legislature. MATC furnishes teachers and facilities for public high school students who enroll in specialized classes at MATC by agreement with local public school administrations.* Students receive credit for work successfully completed at MATC while still enrolled in their high schools. Contractual agreements worked out by MATC also provide services such as the evaluation of job skills developed, exploratory work experiences and diagnostic work-related experience. Participation has nearly doubled since 1970-71 when MATC served 544 students. In 1976, 945 students from 13 districts were enrolled.

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*MATC shares facilities with 19 area high schools on a lease basis during the evening hours, and the high school districts pay MATC at the rate of $1.55 per class hour per student.

- "Early Leaver" Program. Another example of MATC service to high school aged youth, the "Early Leaver" program enables students who have completed the 11th grade and have satisfied graduation requirements to enroll in diploma or associate degree training programs, receive credit for work successfully completed at MATC and still graduate with their high school class.

- Advanced Placement for High School Students. MATC staff work closely with vocational counselors and teachers to develop high school courses that dovetail with postsecondary vocational-technical programs at the college. An advanced placement agreement allows high school graduates to bypass basic typing, shorthand and a technical drafting courses when they successfully complete a competency-based challenge examination. Commercial art students can bypass commercial art courses in a similar manner.

Since its initial advanced placement agreement in 1971, MATC has worked continuously to expand such options for qualified students. A pilot articulation project at Oak Creek High School has resulted in a graphics curriculum that enables Oak Creek graduates to receive credit for up to six courses in the MATC commercial art program. A MATC instructor and two science teachers at Nathan Hale High School are developing an advanced placement program for graduates enrolling in a MATC program which requires natural science courses; and in the area of computer science, some high school contract students are receiving both high school and college credit.

- Youth Skill Center. MATC's most ambitious effort at providing rationalized and cooperative service to high school populations is a Youth Skill Center, which will be built when federal funds become available. The Center will serve youth 14 to 18 years of age providing exploratory experiences in vocational-technical careers as well as training in specific skills.

Although providing a full range of job guidance services, cooperative on-the-job training opportunities with industry and placement services, the Center will not replace any high school's curriculum. Students attending will be required to take academic courses at their high school.

- Other Linkages. Representatives of MATC meet annually with area high school counselors to communicate on career opportunities and respond to questions regarding course requirements. MATC faculty serve on a number of Milwaukee area specialty high schools advisory committees. In addition, "writing and research committees" composed of high school teachers and MATC faculty are formed to develop curriculum guides for articulation purposes. Some state board funds together with MATC monies are used to compensate participants in these projects.

Postsecondary Articulation. Each of the following examples represents a well-organized model of articulation which either facilitates student progress, efficiently utilizes resources, rationally extends MATC services to its constituents, or a combination of all three.

o Advanced Standing Admission to Associate Degree Programs. MATC allows students advanced standing with the transfer of credit from technical institutes, colleges or universities; and/or the evaluation of work experiences and non-traditional education experiences that have been gained from correspondence or extension courses, military training programs, educational television courses, college level work completed in high school, apprenticeship, on-the-job training or independent study. Evaluation depends on either departmental review, passing challenge exams, or presenting satisfactory scores on College Level Equivalent Program Tests (CLEP). Advanced standing options are a major part of MATC's efforts to allow each and every student the fullest possible opportunity to enter training at the point most beneficial to him.

• Crossover. An encouraging answer to the problem of remedial needs of enrollees in associate degree programs, "Crossover" helps students improve basic academic skills before entry. Career counseling is provided along with assistance in reading skills, study techniques, communication skills and mathematics. Significantly, the courses carry regular credit that can be applied to the programs the students eventually enter. Of the 3,000 Crossover enrollees, over 70 percent have successfully completed the program.

• University Cooperation. MATC has agreements with the University of Wisconsin-Milwaukee, Marquette and Nova Universities which allow these institutions to offer courses at MATC regional campus centers as long as the courses do not conflict with MATC's. Such shared use of facilities is regarded as a significant method of cost reduction.

- Consortium. MATC has joined with seven other colleges and universities in the area to form the Metro Milwaukee Consortium with the aim of reaching adults not reached through traditional recruiting methods. The various learning opportunities offered by all of the institutions have, as a result of the Consortium's work, been compiled in a catalogue and widely distributed throughout the area.

- Urban Outreach. During 1977-1978, MATC cooperated with employees and the State Division of Apprenticeship and Training to provide related instruction for 348 apprentices who completed their indentures to become journeymen in diverse trades. In this same period, MATC also conducted 42 training courses (some as short as 3 to 6 weeks) at the request of business and industry. Such short term courses offer substantial economic benefits to MATC since they are scheduled when facilities would not otherwise be occupied.

As the Department of Labor's approved skill center for Comprehensive Employment and Training Act (CETA) funds, MATC is the coordinator of these federally funded programs in its district.

MATC also taught English and technical skills to some of the 23,000 Vietnamese who moved to the Milwaukee area.

MATC officials note that all of these community outreach programs serve as feeders for some of the college's more conventional education offerings. Students exposed to MATC by these sessions often become students in Crossover, or specific vocational programs.

Surveys--Basis for Improvement. Individually, and in cooperation with other institutions, MATC periodically conducts various surveys. Long before detailed planning for a new program begins, MATC's Division of Instructional Services surveys business, industry and agencies as well as employers in the field to determine the need for the program, current and future job opportunities, minimum training requirements, starting salaries and other necessary data.

MATC's Placement Center conducts thorough follow-up surveys of graduates at six-month, two-and-a-half year, and five-year intervals to determine the number employed in their chosen field, the number unemployed, salaries and wages and related information. The survey data is sent to all district high schools and job service organizations, and annual reports are also issued on the wages and salaries of graduates.

MATC recently assisted the Center for Studies in Vocational and Technical Education, UW-Madison, in a federally funded overview project, "Systems Approach to Assessment and Evaluation of Postsecondary Education." Periodic surveys of employers and assessment needs surveys of all high school districts also provide essential data for further articulation of curriculum.

Advisory Committees--Tools for Articulation. Articulation has been successful in Milwaukee because of MATC's ability to establish an effective communication system with business, industry, labor, other educators and educational administrators. One of the most important links in the communication chain is MATC's use of advisory committees. Internally, MATC has a Blue Ribbon Committee which meets yearly to assess the college's progress in meeting its overall goals and objectives. In addition, advisory committees have been established for each of MATC's vocational-technical programs. MATC faculty also serve as members of Milwaukee area specialty high school advisory committees. When questions arise on the need for a new occupational program, MATC forms an ad-hoc committee to assist in preparing recommendations for a program proposal which is submitted to the state VTAE Board. A fourth type of advisory panel is used to judged the adequacy of programs for apprentices.

Since MATC sees its primary mission as occupational education with emphasis on hands-on training, constant contact with a wide world of business and occupational groups is deemed essential to fulfilling the college's goal of styaing abreast of changes and emerging needs. Composed of community leaders, business and industry representatives, educators and employees, each of MATC's advisory committees has played a significant role in furthering the institution's responsiveness to both students and community.

On the state level, MATC has cooperated since 1972 with other VTAE schools and the University of Wisconsin system on two joint administrative committees. The Joint Administrative Committee for Academic Programs evaluates present and future programs that lead to a degree, diploma or certificate before they are considered by the Wisconsin Board of Regents or the Wisconsin Board of VTAE. The Joint Administrative Committee on Continuing Education evaluates present and future non-credit programs in order to avoid unnecessary duplication. Service on each committee allows

MATC initial input and influence in the state-wide articulation process.

Overview. Response to community needs is Milwaukee Area Technical College's major goal as reflected in the words of Robert L. Cooley, first Director of the Milwaukee Vocational School:

"Our time is your time.
Your needs determine our curriculum."

Extending from secondary education through lifetime learning, MATC's educational mandate and performance are proof that a comprehensive institution can also be cost conscious, cooperative and efficient.

THE STATE OF THE ART

While the five case studies just presented serve to dramatize what can be achieved through desire, leadership, and modest dollar resources, other successful articulation strategies were found in use at the 17 additional sites visited during the summer of 1977. Each of the brief examples that follow were chosen in an attempt to illustrate one or more of the ten criteria used as the initial guide in the nominations of local communities by state directors. The illustrations selected document policies or practices which should be of interest to community college presidents, area vocational school directors and others who are searching for ways to provide better vocational services without adding appreciably to their costs of operation. No attempt has been made to describe in intimate detail just how these policies or practices were implemented.

By consulting Appendix G, the reader can initiate contact with those responsible for the practice or policy described.

Formal and Informal Articulation Arrangements

a. Coordinating Councils--Florida Junior College of Jacksonville, Florida and Duval County Board of Education have established a Coordinating Council for Vocational Education and Adult Education as mandated by the Florida State Board of Education. Membership in the Council includes the County Superintendent and Directors of Vocational and Adult Education Programs from each of the local school districts, the presidents and deans or directors of vocational education of the community college, the Mayor's Manpower Director (representing CETA programs), the manager of the local State Employment Office, the representatives of the Duval-Nassau Blue Ribbon Advisory Board, and a local citizen. The purpose of the Council is four-fold--1) to jointly review the total vocational education, adult general education, and community instructional services programs in the area; 2) to encourage the development of new offerings or changes in existing offerings; 3) to take action so that unwarranted duplications in programs may be avoided; and 4) to make recommendations to various local regional and state education agencies. Since the Council was founded in 1972 (one of 28 established throughout the State of Florida), it has among other tasks prepared an inventory of all existing vocational programs and courses in the area served, developed an inventory of facilities and major training equipment available (including the number of stations and level of facility utilization), disseminated this information to counselors in each of the key institutions in the area, and prepared and disseminated information to interested parties regarding assistance programs for those wishing to prepare for a particular occupation.

b. Formal Articulation Agreement--Somerset County College (SCC) and the Somerset County Technical Institute (SCTI), located in Somerville, N.J., have drawn up a joint agreement designed to give over-all direction to a joint program between the two institutions and to tie down specific administrative regulations. The purpose of the joint agreement is five-fold: 1) to encourage cooperation between the two institutions; 2) to provide comprehensive day and evening career programs; 3) to implement coordinated educational planning; 4) to support the business-industrial-technical community through appropriate education programs; 5) to provide a coordinated educational delivery system. The joint programs encompass such career fields as technical, health, and business occupations but can be expanded to include newly developed career programs as well. Program scheduling is coordinated to deliver services on a year-round basis including day, twilight, evening, and week-ends. SCC for the most part offers the general education courses and SCTI the laboratory and technical courses. Library facilities of both institutions are available to all students enrolled. Tuition payments are shared between the two institutions and laboratory fees are established at a rate pertinent to the specific lab involved. The over-all program is administered by a Joint Administrative

Committee composed of the chief executive officer of each institution and two key administrators of each institution as appointed by the chief executive officers. Policy considerations for the joint programs rest with a Joint Board Committee consisting of two members from each board (SCTI's Vocational Board of Education and SCC's College Board of Trustees).

c. A Contractual Common Market--John Wood Community College (JWCC) and six other schools in three contiguous states are cooperating in a "common market" approach to community college education. The underlying philosophy is one of making full utilization of all available educational resources in the area to provide educational opportunities to district residents. Thus, two four-year liberal arts colleges, two private junior colleges and two proprietary vocational technical schools (one business school and one technical institute) offer, by means of a contract with JWCC, career programs in 13 fields of study. Students entering John Wood Community College work out an educational program with the assistance of a JWCC appointed counselor or advisor. Students may enroll in those courses offered directly or indirectly by JWCC on or off campus. While the student registers for his classes at JWCC, he attends classes wherever they are held. A copy of the registration goes to each school where his classes are to be taken. The instructor of the course has no way of knowing whether the student is a JWCC student or registered at the school where the course is offered. At the end of the semester, grades are turned in to the appropriate registrars who then forward the grades to the registrar at JWCC to be recorded on a permanent transcript. JWCC counselors and other staff members maintain contact with students throughout their educational programs, and a full range of student services are provided.

Follow Up Surveys

a. Student Information Service--In 1974, Tarrant Junior College, under contract with the Texas Education Agency, developed a management information system for the follow up of students who enter Texas community junior colleges. Dubbed Tex-SIS, this totally computerized follow up system has been designed to track students at various points of attrition. Seven subsystems have been developed (using 14 questionnaires) for follow up of both transfer and occupationally oriented students. The seven subsystems are: 1) Student educational intent; 2) withdrawal follow up; 3) nonreturning student follow up; 4) graduate follow up (first-year, third year, and fifth-year); 5) employer follow up; 6) adult and continuing education; 7) state follow up reporting. An expanded Tex-SIS system for state wide use has been designed to generate employment data for postsecondary educational/demand systems (to be implemented by the state's 1202 Commission of Postsecondary Educational Planning) and to help fulfill other reported requirements of state departments of vocational education, veterans administration, and guaranteed student loan agencies. T.J.C.'s use of Tex-SIS has been in such areas as formulating college policies and guidelines, identifying needed student development and instructional improvement activities, student recruitment, labor market supply/demand information, institutional planning and evaluation, cost effectiveness studies, institutional research, college promotion activities, and communication and sharing of data with other colleges and agencies.

b. Placement Services--Year after year, the Iowa Central Community College (ICCC) in Fort Dodge, Iowa succeeds in placing 95% of its graduates in jobs for which they are trained. Approximately 62% of those graduating from vocational educational programs at ICCC remain in the nine counties making up the service area. These statistics are just part of the data gathered annually through a student by student survey conducted by ICCC's Placement Office. This continuous effort to monitor and report on the success of graduates (and non-graduates) is part of the reason why ICCC enjoys the reputation it does for student service.

The surveys indicate that the students are not only well prepared and well paid to do the work for which they are trained but such information helps to reassure potential enrollees from feeder high schools that they too will find work.

Employers are also surveyed and the results indicate that ICCC graduates do well in the fields they choose. Frequent visits from local employers requesting graduates testifies to their success. Students moving on to four-year institutions also report that they are able to compete effectively with students who begain their education in a senior institution. Through a broad dissemination of its annual report on student placement, the Student Services Division provides dramatic evidence for high school counselors, advisory committee members, and state legislators that ICCC is doing an effective job of vocational education.

b. Sample Survey of College Leavers--The Peralta Community College District in Oakland, California makes effective use of the data it gathers annually on graduates and "non-renewers." By systematically sampling approximately 13,000 students who leave the Peralta District's 89 different occupational programs each year, the occupational program director can determine what relationship exists between a student's coursework at a Peralta College and his or her current work status. The follow-up questionnaire, a pre-addressed postcard, contains questions on current employment status, the relationship (if any) between college training and current job, the value of that training, and other items concerning the quality of instruction, counseling, and placement services at the college. Responses are analyzed and results reported to all occupational division chairpersons and to the state.

Modularized Curriculum and Individualized Study

a. Career Clusters--Tri-County Technical College, one of 16 located throughout South Carolina, has successfully pioneered a career cluster project in conjunction with the high schools in its surrounding counties. Machine Tool Technology and Heating and Air Conditioning-Refrigeration are two of the instructional program which have been organized into a continuous program of study such that students can move easily from one program level or type of school to another. The basic unit of instruction is the Learning Activity Package (LAP), with each package offering a specific, measurable behavioral objective (and the criteria for use in determining satisfactory completion of that objective); directions on how to complete the package; written and performance tests;

step-by-step instructions for all shop procedures; and a rational linking the individual LAP to the overall purpose and content of the course.

b. Open Entry, Open Exit—Several years ago, the Mississippi Gulf Coast Junior College in Perkinston, Mississippi, incorporated an "open entry/open exit" system for its vocational education students to better accommodate the needs of students enrolling and employers seeking graduates. Students seeking admission to a vocational program may apply to be admitted the first Monday of each month. Instruction is primarily along the competency based individualized instructional mode so that these students can be accommodated on a staggered basis. The college has experienced considerable success in attracting students to this program.

Credit Transfer

a. Nursing Career Ladder—Students seeking to qualify as nurses in Rome, Georgia, have the best of two possible worlds. They can enroll at Coose Valley Technical School as candidates for a Licenced Practical Nurse certificate with the understanding that they can transfer some of their credits to Floyd Junior College should they decide to go to qualify for the Associate Degree Nurse. Both transferees and people with prior nursing experience are encouraged to take a nationally standardized National League of Nursing approved achievement test for which they can receive up to two quarters worth of credit toward the ADN Degree (15 credit hours). Currently Floyd Junior Colleges is cooperating with Georgia State University (G.S.U.) to offer G.S.U. approved courses on its own campus for students wishing to qualify for a B.S. in Nursing. In other joint programs between Coose Valley Technical and Floyd Junior College, GLEB exams are used to provide credit or exemption from selected occupational programs.

b. Joint Enrollment—The Gradwohl School of Laboratory Technique, a private not-for-profit vocational school located in St. Louis, Missouri, has worked our credit transfer agreements with both in- and out-of-state community colleges, four year colleges, and universities. Typically, a student will jointly enroll at Gradwohl and the coopratlng institution. The college guidance counselor reviews students before entering Gradwohl. The counselor will help determine which would be more beneficial to the student - entrance either first at Grandwohl or the community college. Because of the practical nature of laboratory technician training, students are encouraged to take their initial courses at Grandwohl before transferring to another institution. For those who complete the Gradwohl course of study (a 52 week program), cooperating community colleges grant one year's credit toward an Associate Degree. Since Gradwohl's units of instruction are modularized students may enter at the beginning of any month. Publicity for the joint program is offered in the catalogs at cooperating institutions, through advertising in medical journals and periodicals, and through a directory of allied health programs in Missouri and Illinois.

Joint Planning

a. Coordination Through Committee—Coosa Valley Technical School administors in Rome, Georgia, spend considerable time meeting with and serving on the Area Manpower Council and The Area Planning and Development Commission. Both the Council and the Commission must sign off on proposed CVTS programs before the state will give its approval. In addition, the local Vocational Advisory Committee meets twice a year to advise and council vocational directors at the secondary and post-secondary level. A Health Coordinating Committee links the allied health programs of CVTS, Floyd Junior College (FJC) and the local hospitals and medical clinics. Both CVTS and FJC assign appropriate faculty members to serve on each other's occupational advisory councils in order to better coordinate related programs at both institutions.

b. Kentucky's Cooperative Climate--In December, 1974, the Kentucky State Board of Education and the Council on Public Higher Education adopted an inter-agency memorandum of understanding and agreement on post-secondary vocational technical education (see Appendix I). Reflecting the spirit of this agreement, the Madisonville, Kentucky, area vocational school and the local community college have worked out a continuous pattern of interaction such that staff at both institutions meet frequently to jointly plan course offerings. Industry and education heads meet quarterly to project skill needs by skill level. Joint advisory committees work to see that various programs (mining, allied health, etc.) mesh smoothly.

Both institutions have benefitted from jointly sponsored community needs assessments surveys. Co-authored proposals submitted to state and federal agencies for funding have enjoyed considerable success. In Madisonville, cooperation is contagious.

SUMMARY AND OBSERVATION

This chapter began with the brief recital of two typical cases where the individuals concerned could have benefited from student-oriented articulation efforts on the part of the local institutions involved. It ended with a review of successful practices currently in place at many of the institutions visited during the course of the Joint Study. Throughout the recital of these case studies and vignettes we have attempted to dramatize the feasibility of articulation agreements and programs. Through joint planning, joint publicity, joint surveys, shared resources etc., a portrayal of successful working arrangements has been provided. Who should be contacted for more information has been identified in Appendix G. These people deserve our recognition and appreciation. Unfortunately, we have not done justice to other efforts brought to our attention by the state executives initially contacted in the survey. To those programs and practices which fell outside our sample of 22 sites, we owe an apology. Perhaps follow-on studies will enable these deserving efforts to be described and publicized.

Before closing this chapter, it would be unfortunate if several state-wide initiatives now under way in Illinois, Michigan, Minnesota and North Carolina were not given at least honorable mention. Appropriate points of contact for those wishing to obtain further details have been included in Appendix G.

By identifying and describing practices and procedures that have resulted in successful articulation among institutions engaged in vocational education, we hope to not only give recognition where it is due but to encourage risk taking in locations where little cooperation has been achieved. Hopefully, the models offered in this chapter will prove to be useful. Cost cutting and expanded enrollments may result. The ultimate beneficiaries, of course, ought to be the millions of full and part-time students seeking to enroll in or to complete courses of study.

CHAPTER 7

CONCLUSIONS AND RECOMMENDATIONS

INTRODUCTION

The major purpose of this chapter is to provide a set of guidelines by which community colleges, area vocational schools, and other post-secondary institutions offering non-baccalaureate occupational programs can develop their own policies and strategies for improving interinstitutional planning and cooperation. The recommendations which follow offer a framework for formulating policies and are therefore not to be interpreted as substitutes for existing policies. If they are sound, each state and local district should be able to enhance services and reduce the cost of operation through articulation. Not only are such benefits expected to redound to individual institutions, but communities should benefit through providing greater access to and variety of programs. Many of these recommendations are directed at local and state educational decision makers. Some will have applicability at the federal level. From our earlier discussion, it was established that much of the legislative authority already exists for implementing many of the recommendations that follow. What is needed is individual and institutional commitment to carrying them out.

Earlier chapters have established that states are taking on increased responsibility for insuring local coordination. It has been the general assumption that a state plan for coordination in conjunction with volunteer interinstitutional consortia can achieve effective and mutually beneficial linkages. It is not enough, however, to promote an attitude of mutual respect and cooperation.

Articulation can most successfully be achieved where institutions voluntarily cooperate because each stands to benefit. It is our belief that as these intitial efforts mature and expand, interinstitutional dependence will grow stronger. In the end, the needs of the local community, individually and organizationally, will be better served.

It should be noted that the recommendations that follow are the product of five regional and one national conference where over 500 local and state officials met to examine key issues and to formulate recommendations for the improvement of interinstitutional relationships. Many of the recommendations that emerged were tied to five topics of discussion undertaken at each of the meetings.

The first topic, finance, was built upon the recognition that the comparative high cost of vocational education requires some consideration of how to expand financial support if equal access to post-secondary training opportunities is to be available. The second topic, improvement of data systems, was organized around the concern that national and state level planners need better data upon which to base their decisions. The growth and proliferation of post-secondary occupational programs in recent years, particularly in the nontraditional sphere such as in business and industry, the military, proprietary schools, unions, and voluntary and professional associations, have focussed attention on ways of gathering and reporting data from all sectors of training. Who and what should be included was the focus of those concerned with this topic of discussion.

A well rounded education covering both career orientation, preparation, and advancement, requires more than narrow job skill preparation. The role of secondary and post-secondary vocational programs in guaranteeing that multiple needs at various age levels and experiences are being met was the theme of this third topic.

Barriers to interinstitutional coordination and planning was the focus of the fourth discussion group. Federal, state and local program articulation where increasing competition for resources and clientele was concerned, became the focus of the various groups discussing policy recommendations and procedures needed to overcome this barrier to articulation.

Credentialing and the awarding of credit are important functions which educational institutions perform on behalf of students and employers. What is needed are ways of insuring that credits and credentials accurately reflect what they are supposed to communicate. In addition, some way of building into the present system a means by which knowledge and skills attained through life experience in or outside of educational institutions must also be weighed. How that experience can be assessed and credit provided without penalizing the institution or the student was the concern of this last discussion group.

At each of the regional conferences and the national conference, a questionnaire was distributed to each participant for the purpose of determining his perception of needed improvements in articulation practices. The questions were grouped under 10 headings with each grouping containing 3 to 6 items rated on a 5 point scale from "no problem" to the practice is "nonexistent." (For a copy of the survey instrument as adapted from a Texas A&M University guide, see Appendix H.) In addition, each respondent was asked to circle the three problems which he or she would like to focus on during the conference.

The primary use of the results of the survey questionnaire was one of providing discussion leaders at each conference with some indication of the major concern that conference participants had regarding each of the five topics on which the discussion groups concentrated. The discussion leaders had the option of conducting their own informal assessment by inviting members of the discussion group to comment on the issue under discussion or of administering the survey instrument.

Each discussion group leader was asked to explore issues, rank order these issues, and then prepare a set of recommendations for presentation to a plenary session on the second day of the conference. During the second day, the audience was seated at tables of no more than 6 to 8 persons and asked to listen to the presentations by each of the five discussion leaders of the prior day's recommendations. Further modifications and/or additions to the recommendations presented were then collected in written form before the close of the conference. In each case (with the possible exception of the national conference where time was limited), ample opportunity was provided for a full expression of views and for minority opinions to be heard. What follows then is the result* of these discussions and deliberations presented as they relate to federal, state, or local policy concerns. Much recognition is due those individuals who voluntarily gave of their time to serve as group discussion leaders at the various regional conferences and the national conference. This commitment, usually without compensation, required background preparation, skill at leading discussions, and an ability to forcefully present the recommendations emerging from their discussions. Collectively, they are the authors of this chapter and other portions of the report.

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*Because of the number of recommendations proposed and the frequently overlapping rature of those recommendations, it became the responsibility of the project director, with the able assistance of the various discussion leaders, to sort out and phrase the recommendations in as accurate a manner as possible.

FINANCE

A. Issue: The shift in federal financial policy from institutional support to direct funding of students together with a leveling off of federal appropriations for vocational education has led to increased competition among local vocational institutions for students.

Discussion: As federal policy has shifted its emphasis from institutional to student support as its primary vehicle for funding post-secondary education, increasing competition for students has put pressure on institutions to offer an array of appealing programs and services. Expansion of existing programs or the offering of new ones cost money. Unfortunately, to systematically determine a community's needs and to insure an adequate response costs even more dollars. The issue of survival is at stake. The degree to which articulation can occur under stringent budgetary conditions is a matter that deserves our earliest attention.

Tight educational budgets at both the state and local levels together with the high cost of vocational education have limited the availability of programs and student services which contribute to the successful movement of student from one institution to another or from education to work or vice versa. Adequate counseling regarding the requirements of occupational programs particularly where a student has not yet made a career commitment is essential. Placement services are a must for 17 to 20 years olds entering the labor market for the first time. Financial counseling is critical for both students and the institution involved. Special orientation programs for occupationally oriented transfer students are needed to insure the smooth transition of a student from one institution to another. Developmental or remedial education programs are sorely needed. Costly vocational programs clearly depend upon some form of financial support other than those driven by enrollments. Unfortunately, the more expensive programs are often the ones serving the greatest demand.

As states have moved to comply with recent court rulings (not to mention increasingly burdensome federal reporting requirements), little in the way of additional monies to help cover such costs has been made available. This fact coupled with plateaued federal appropriations on behalf of vocational education has added to already overburdened local and state appropriations.

Recommendations:

1. Federal Level

   a. Funding formulas for post-secondary occupational education programs need adjustment to provide a proper emphasis on articulation. While there may be a number of models which reinforce interinstitutional cooperation, most have yet to be thoroughly evaluated in terms of their potential contribution to articulation. Funds should be made available through the N.I.E. five year evaluation study of vocational education for this purpose.

   b. Given the fact that for the past seven years, federal support for vocational education has declined in relation to other manpower training and education priorities, budgets requests for FY'79 should be raised from as estimated $430 million to $630 million. Program improvement and support services (Section 130) should be expanded from the estimated $107.5 million to $157.5. Such services include support for research and the development of exemplary and innovative programs.

2. State Level

a. Since local institutional competition can inhibit articulation practices, regional approaches need to be tested with regard to fiscal support patterns or models.

b. Current manpower development programs such as CETA with their pass-through provisions in support of local prime sponsors need to reflect through joint planning and budgeting procedures at the state level the potential contribution that vocational education programs and facilities can make to a statewide manpower development effort.

c. State and local officials should be advised as to the long term financial obligations likely to be incurred at the time a new occupational program or vocational education facility is being considered. A careful inventory of already existing programs and facilities may help to avoid overbuilding.

B. Issue: Past emphasis in vocational education on secondary programs has led to insufficient funding of postsecondary programs.

Discussion: The rapid growth in vocational education enrollments, particularly at the postsecondary level, reflects the fact that both traditional and nontraditional students are turning to vocational education as a means of qualifying for higher level occupational opportunities. Both community colleges and area vocational schools during the 60's helped to give added impetus to the expansion of enrollments at the postsecondary level, a growth rate which currently exceeds that of secondary programs. The passage of Vocational Education Act of 1963 and its various Amendments has served to broaden the scope of vocational education and its appeal to students of all ages. Unfortunately, state and federal expenditures have not kept pace with the spiraling costs of post-secondary vocational education.

Among the arguments in support of alternative strategies for expanded funding of vocational education is the suggestion that funds be allocated by program level. Special interest groups have advocated percentage set-asides of federal funds for postsecondary vocational education or have advocated that state coordinating bodies be given responsibility for a more equitable allocation of federal funds. Less attention, however, has been given to the argument that funds should be allocated on the basis of demonstrated need or costs.

Recommendations

1. Federal Level

    a. It is suggested that Congress provide some way of expanding support for postsecondary vocational education, as well as secondary programs, with built-in assurances that federal funds will be allocated primarily on the basis of level of education. Such a mechanism should cover not only postsecondary vocational education but adult vocational education programs as well. (Such funds should be under the aegis of the State Board of Vocational Education so that they can be distributed in the most equitable way to meet the needs of all individuals in each state or region).

2. State Level

    a. State Coordinating Boards for Vocational Education should consider setting up regional coordinating bodies whose primary responsibility will be to determine vocational education needs in the region and encourage the full use of state and regional resources in responding to those needs.

DATA SYSTEMS

A. Issue: The absence of a national uniform data system has hindered the expansion and articulation of vocational education at the post-secondary level.

Discussion: The growth both in programs and expenditures on post-secondary education has increased the need at the national level for information on which to judge the impact of these federally supported programs. The opportunity and ability to collect and analyze these data, however, are hindered by the number of federal agencies involved, the definitions and procedures employed in data collection, and the time it takes to gather, analyze and report the information collected. The Educational Amendments of 1974 and 1976 specifically address the federal government's responsibility for continuously monitoring the impact of vocational education. A major part of that responsibility will be to determine how well the needs of employers, potential or current employees, the unemployed, the underemployed, women and other specifically identified target groups are being met. The setting up of a National Occupational Information Coordinating Committee (NOICC), and its counterpart at the state level (the SOICC), was specifically aimed at helping states to devise compatible data networks for the purpose of improving the planning of vocational education.

A uniform reporting and accounting system must serve several masters. Congress is concerned that the data being collected be usable. The U.S. Office of Education is concerned over the burden that too much data collection imposes on local institutions. The National Center for Educational Statistics is concerned that various legislative enactments define target groups in conflicting terms. State and local administrators are concerned with supplying the data requested and at the same time using the data available to guide their own decisions. Each concern must also be reflected in the formulation of an improved strategy for encouraging interinstitutional cooperation and coordination.

Currently, three data collection systems concerned with manpower development and training are operating at the state level. First, the State Board of Education collects and reports data on vocational education enrollments and expenditures. Second, the State Board of Higher Education or its equivalent gathers data concerning occupational education program expenditures and output of community colleges, technical colleges and branch campuses of four year institutions. Third, the State Manpower Services Council oversees the CETA sponsored programs and collects data on programs and enrollments. The challenge is to somehow unite these three efforts, each operating under a different governance structure, so that the data on program outputs can be compared and appropriately analyzed.

Focusing on post-secondary occupational education in particular, earlier efforts to design state level data systems were based primarily on the need to evaluate how well the needs of state residents were being served. Enrollment projections, the assessment of participation rates of various income and ethnic groups, and enrollments by type of programs were among the data gathering efforts prior to 1974. Since then, however, there has been an increasing interest in matching demand with the supply of programs and services. Data on the geographical location and types of programs offered together with types of institutions has been added to an already extensive data collection effort. Of more recent origin, program "output" and competency data is being emphasized in a number of states.

Among the data requirements of local administrators interested in better articulation is the need for information on potentially overlaping occupational programs in a given region, students in need of training, types of services required, and institutions or facilities available. Most local administrators also need training in the use of education and manpower data for planning purposes.

A caveat should be offered at this point: most people don't really care about how carefully definitions have been worked out and data gathered; their real concerns are with the availability of programs, the quality of those programs and the overall cost. While many states and the federal government are putting increased effort into the development of a compatible definitions and data systems, there has been a concern among students, taxpayers and, to some extent, educational administrators, with meeting educational needs at a reasonable cost, not with filling out detailed statistical reports.

Recommendations

1. Federal
   - a. NOICC and SOICC provisions in the Educational Amendments of 1976 and in CETA should be fully funded. The benefits to be realized will more than offset the modest cost ($10 million per year) for building an adequate national data network.
   - b. As a result of the Educational Amendments of 1976, state post-secondary education commissions gained a new set of responsibilities for interstate cooperative education projects. We recommend that the provisions for implementing this action need to be built into state plans for gathering data on both the demand and supply of occupational education within and between states.

c. Federal, regional, and state forums should be sponsored periodically by the federal government so that information can be exchanged on the gathering and interpretation of data for planning purposes. Such forums should be based on systematic needs assessment surveys and regional or statewide employment projections.

d. Congress should authorize and appropriate full funding of Title III of the current pending CETA legislation in order to put local educational agencies and post-secondary institutions into a position where they can be of assistance to prime sponsors.

2. State and Local

a. State coordinating boards should require the publishing of a list of all occupational programs and their sponsoring institutions for distribution statewide to assist students in identifying where programs are available and to assist planners in pinpointing where unnecessary gaps or overlaps occur.

b. At the local level, guidance and placement counselors at both the secondary and the post-secondary levels should be thoroughly familiar with the occupational programs of the institutions in their area. Such persons also need to be trained to conduct employer surveys, follow-up surveys of graduates, and in the effective use of manpower data.

c. Across the board accountability for placement of vocational education graduates places a severe burden on those programs and institutions having responsibility for the training of the handicapped and disadvantaged. Consideration should be given to further refinement of the criteria for judging the success of vocational training as it relates to the potential achievement of selected target groups.

d. Program based cost accounting as currently proposed by the new Vocational Education Data System (VEDS) would give consumers and taxpayers a much needed mechanism for making cost comparisons among local programs and institutions. Further refinement of the VEDS system is needed to separate out those costs associated with vocational education activities from those in related areas that should not be directly identified as vocational education.

THE NATURE OF VOCATIONAL EDUCATION

A. Issue: Before the issue of articulation can be fully resolved, the role of vocational education within the larger sphere of education needs to be clarified. What is the relationship between vocational education and adult education, between vocational education and academic education, and most importantly, between vocational education and career education? Should the primary emphasis be on preparing students for entry into the world of work or should vocational education be concerned with giving people of all ages opportunities for pre-, in-service, and post-career training?

Discussion: The fundamental question confronting vocational educators is what type of education should be provided, at what age levels, and in what form? Should educators be content to teach entry level job skills so that students can become self-supporting at an early age or should they be concerned with helping students sort out and qualify for longer term careers? Advocates of this latter positon argue that students must assume many life roles—consumer, worker, citizen, parent, family member—and will spend more of their waking hours off the job than on it. Advocates of the former point of view contend that once the student becomes self-sufficient and develops a sense of confidence and self-direction, that student will voluntarily return to school on a part-time basis if necessary to prepare him or herself for new careers or develop those skills needed to move up a career ladder.

While this particular topic generated the greatest heat during the regional and national conferences, a number of key questions were left unresolved. For example, what should be the criteria for differentiating between post-secondary and high school level vocational programs? Is there a difference between experiential learning and vocational learning? What are the special needs of women, the older worker, the offender, and the disadvantaged and how should these be met? Should vocational education graduates be given not only entry level job skills but also a better understanding of how to retain a job, to climb a career ladder and to enable the graduate to better grapple with the realities of the world of work?

Another unresolved issue is at what level and in what type of institution should the various types of vocational education be provided? In the interest of offering as many options as possible to students of varying age levels, incomes, and needs, some form of orchestration of programs must be implemented at the local level if students are to be free to exercise choices and decisions appropriate to their stage of skill development and career interests. This suggests, for example, a student who has worked for a number of years may seek to return to an institutionally based program for further education or credits that would enhance his or her opportunities for job advancement. On the other hand, a student right out of high school may realize that without the development of a specific skill, he or she may have difficulty qualifying for their initial work role. Students will differ not only in terms of training needs but in terms of their financial resources and time available for training. When artificial barriers are erected which prevent both the traditional and the nontraditional student from gaining access to available programs, then he is in trouble.

In addition to these current concerns, the goals and programs of vocational education as currently interpreted must also be examined from the perspective of the coming role of work and education in America. Policymakers are embroiled in a running debate on how and who vocational education should serve in the future.

Supporters and critics alike agree on the need for a national debate. Intensifying competition, particularly among young adults for better jobs, continued shifts towards expanded service occupations, changing mix of students enrolled in post-secondary occupational education programs (fewer white males and more females and minorities)—all of these factors suggest that institutions most likely to succeed in the future are those that can respond flexibly to this changing market. One of the strategies that we have advocated throughout this report is, of course, more effective interinstitutional cooperation. An open market exists where much of the freedom to choose and respond to institutionally provided occupational opportunities lies in the hands of prospective students. Such a market is forcing area vocational schools, technical institutes and community colleges to expand their range of services in order to take on the increasingly tough educational chores—that of remediating and adapting to the learning abilities and skills of students of all ages who wish to improve their qualifications for work.

Recommendations

1. Federal Level

   a. The U.S. Office of Education should through the Bureau of Occupational and Adult Education develop a data bank of competencies needed by individuals to enter or qualify for work in a broad range of occupations. Appropriate criteria for assessing whether or not these competencies had been achieved would also be required.

   b. The U.S. Office of Education and the National Institute of Education should consider the development of guidelines for incorporating competency objectives into vocational education curricula including the development of life skills*.

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*Life skills are defined as those individual capabilities which enable one to qualify for employment, advance in a career, and enjoy the benefits of a lifetime of employment.

Such objectives should be geared to the various levels of education, e.g. secondary, post-secondary, and adult, as well as to the career goals of the individuals concerned.

2. State and Local

   a. State administrators should be encouraged to convene periodic state-wide and regional workshops to explore the missions and programs of post-secondary vocational education institutions. Such issues as the relationship of vocational education to other forms of education, the shifting needs of consumers and how these can best be served, the philosophy of vocational education, and the role of state governing and coordinating boards for vocational education would be discussed.

   b. State leaders should take an active role in developing a state-wide system of vocational education outcome measures for use by local school districts.

   c. State administrators should be encouraged to set up in-service training programs for vocational education teachers, counselors, and administrators, directed toward improving communication and joint planning among local or regional secondary and postsecondary institutions.

3. Local Level

   a. Open entry-open exit programs often facilitate student access to programs at times convenient to students. Programs should be organized into modulized units of instruction, with each unit having its own set of criterion referenced tests to enable instructors to adapt their course offerings to individual student preferences and prior learning and experience.

b. By means of a community-wide "truth in advertising" campaign, local education and training institutions should convey to interested parties the scope and nature of the occupational offerings available, the prerequisites to be met before enrollment, the cost, the probable outcomes, the time involved, and the transferability of credits received to other institutions.

c. Local secondary and postsecondary institutions should collaborate in seeking funds for the purpose of jointly planning and articulating their curriculum programs.

e. Local vocational educators should accept responsibility for communicating to employers, parents, and students that the development of vocational skills is a lifetime process. Institutions in the area should meet to orchestrate a set of coordinated programs designed to serve the needs of people at various stages in their working careers.

INTERINSTITUTIONAL COOPERATION

A. Issues: Program articulation is viewed by some as simply enlightened self-interest. Achieving successful articulation among two or more institutions requires leadership, resources, and a plan. How to implement such plans in a variety of settings, some hostile, some receptive, is a process requiring skill and commitment.

Discussion: Improved program coordination at the state, regional, and local level was clearly the most pressing concern of participants in the five regional and the national conference. Approximately 70% of those responding to the needs survey conducted at each conference indicated they saw a need for improvement in area and state-wide joint planning efforts, in developing cooperative in-service training programs, in determing who should offer new programs, and in sharing resources such as staff, facilities, and equipment. This single topic has, of course, been the major concern of this report. To review already presented arguments at this stage would be redundant. The orderly progression of students from one level of education to another or from one program to another requires a well-developed, carefully conceived plan for building collaborative relationships. The dilemma faced by the more traditional institutions is that they find themselves having to compete for the nontraditional student with proprietary schools, CETA sponsored programs and even industry itself. We have argued that the best way for traditional institutions to complete is to cooperate.

Sorting out who is to provide what to whom has become over time the responsibility of state governing and coordinating boards of vocational education. However, as new state commissions are put in place, some without the participation of professional educators, they have taken on stronger policy making roles. Where local institutional competition has been most pronounced, these new commissions and agencies often assume additional powers. Local educators are understandably concerned that when the primary policy making authority is vested in the hands of noneducators, political issues and fiancial problems are likely to predominate. What, then, should be the role of state level coordinating agencies and advisory boards in developing and encouraging local cooperation? What should be the role of the federal government, and various national interest groups in supporting a policy of interinstitutional cooperation without usurping the legitimate responsibilities of those charged at the local level with serving educational needs? How can the history of misunderstandings, suspicions, and poor communication among local institutions seeking to offer many of the same types of programs and services be overcome?

Recommendations

1. Federal Level

   a. The Educational Amendments of 1976 (Title II of 94-482) should be amended to permit a portion of each state's basic vocational education grant to be used to encourage or support inter-institutional coordination at the regional or local level. Such support would be analogous to the provisions under Title III of the Higher Education Act of 1965.

b. The Bureau of Adult and Vocational Education of the United States Office of Education should develop guidelines which would encourage state and local advisory and governing boards to jointly establish policies and procedures that will facilitate articulation. Compliance with these guidelines should be voluntary, not mandatory.

c. AVA and AACJC should continue to exert leadership, provide models, and promote articulation policies and guidelines for use at state and local levels. The advice and counsel of the AVA/AACJC Joint Advisory Committee should be retained in order to continue the cooperation of the two agencies on behalf of promoting the goals and benefits of vocational education. Such cooperation should include consideration of the recent developments in CETA and related manpower training programs.

2. State Level

a. State manpower advisory councils, state boards of vocational education, state commissions on vocational education, state advisory councils on vocational education, and other agencies or commissions having some responsibility for vocational education should work together jointly to establish a policy statement encouraging local articulation among secondary and post-secondary institutions offering vocational training.

b. Using federal funds appropriated for strengthening and improving programs and support services in vocational education as authorized by 94-482, coordination between the legislative and the administrative branches of the state government should be enhanced.

c. Both short and long-range vocational education plans should emphasize the need for improved articulation and offer incentives to local districts to move in that direction. As states undertake their annual review of state-wide plans for vocational education, such interstate agencies as the Education Commission of the States and regional accrediting organizations could be looked to for assistance in developing articulation plans.

3. Local Level

a. Articulation planning should begin with specific activities which have been well-worked out in two or more local institutions from the standpoint of procedures. Such activities as recruitment, admissions, and the evaluation of credit offer logical areas in which initial agreements can be worked out.

b. Articulation efforts should involve the personnel who must deal directly with the problem(s) under consideration. Appropriate representation needs to be solicited from those institutions involved such as high schools and proprietary schools. Students as well as staff views are needed to achieve a well-rounded perspective on all aspects of articulation.

c. Consideration should be given to the establishment of an overall administrative coordinating committee whose responsibility it would be to adjudicate issues that are unresolved at lower administrative levels. Such a standing committee should be called upon only as a court of last resort.

d. All forms of interinstitutional cooperation and communication should be encouraged appropriate to the tasks at hand. Newsletters, visits between campuses, follow-up interviews with transfer students, routine feedback of performance data on transfer students and working graduates represent possible ways of insuring effective communcation.

e. Any formal articulation programs should build in a means for providing a periodic evaluation by some outside agency or group. The criteria for evaluation should focus on the process strategy, the personnel involved, the appropriateness of activities worked out, and evidence of concrete achievement.

CREDENTIALING AND THE AWARDING OF CREDIT

A. Issue: Non-traditional, older, career oriented students are demanding, and getting, credit for prior learning. Modifying the current system to accommodate these demands while at the same time maintaining appropriate standards is a major concern of state and local administrators.

Discussion: With the increased acceptability of educational credentials as a measure of a job applicant's qualification for work, the question of how accurately such credentials reflects an applicant's true skills needs to be examined. On the educational side, representatives of post-secondary educational institutions have been attempting to build into their current credentialing system a way of accommodating knowledge and skills acquired outside the enrolling institution. On the work side, business and industrial organizations are increasingly asking themselves just what qualifications should they seek in new job applicants.

The shift in enrollment in post-secondary occupational programs away from the traditional college aged student to older, part-time students has put pressure on educational institutions to adopt their credit assessment and credentialing procedures to more accurately reflect the experiences and backgrounds of those students. With the increase in nontraditional modes of education and in direct financial support for students (rather than for institutions) educators are concerned with devising procedures for giving credit where it is due but at the same time maintaining the integrity of the institutions involved.

Granted that the institutions we have studied have evidenced increased willingness to modify their credentialing procedures and offer credit for prior knowledge and skills, critical issues still remain as to who should decide what credit is to be given and how, what role and responsibility should external organizations such as licensing groups, accrediting agencies, employers, unions, etc. play in setting criteria, and how can sending and receiving institutions work out arrangements such that students move smoothly from one institution to another without loss of credit?

Full recognition of learning achievements is a worthy educational and social goal. Achieving this goal will depend to a large extent on providing equitable recognition for all prior learning experiences. Unfortunately, the adoption of the procedures necessary to implement the granting of credit for prior learning run counter to well entrenched institutional interests. It possesses a threat to already established program requirements and implies a need for more individualized and modularized curriculum materials. In addition, it introduces a whole new set of fiscal problems. The more credit awarded for prior learning, the lower the F.T.E. allowance. Ways of determining and allocating the not insignificant costs of performance testing and assessment need to be worked out if the practice is expected to gain widespread acceptance.

Another set of issues revolve about the priority that many higher educational institutions place on maintaining policies that discriminate against students who do not plan to complete a baccalaureate degree. Sending institutions (such as high schools) are unsure of just what to recommend to their graduates in the way of preparation for transfer.

Among the other issues discussed at both the regional conferences and the national conference were the varying requirements that institutions imposed on students enrolled in the same occupational training program. The number of credit hours required, subject matter mix, and prerequisites frequently vary from one institution to another. Transfer students often are forced to cover much of the same subject matter in order to accumulate the necessary number of credit hours imposed by the receiving institution.

On matters of evaluation testing, students entering into a post-secondary institution are frequently not given the opportunity to demonstrate their occupational competencies or to "challenge" a course in order to qualify for advanced placement in it. The practice of advanced placement is hampered by complicated qualifying procedures, concerns of sending institutions over loss of F.T.E.'s through dual enrollment, and the reluctance of receiving institutions to honor prior credits for the same reason. In addition, students with outside work experience are sometimes not made aware that they can receive advanced credit if they ask to be evaluated.

Recommendations

1. Federal Level
    - a. AVA and AACJC should publicize exemplary practices of awarding credit for prior learning now under development by such groups as the Cooperative Assessment of Experiential Learning (CAEL) and the American Council on Education's Task Force on Educational Credit and Credentials.
    - b. Guidelines for implementing performance standards for new and emerging occupations need to be established and support given to developing new curricula built to meet the specifications of

these performance standards.

c. Congress should consider support of a national study of fiscal implications of alternative ways of funding the awarding of credit for life experience.

2. State Level

a. State level administrators should work out appropriate criteria for awarding credit for knowledge and skills already acquired, regardless of how they are acquired, with licensing groups, accrediting agencies, and other special interest groups.

b. Minimum competency standards should be worked out for all relevant occupations in a particular state.

c. State level agencies should support through grants and contracts the development of models and procedures for awarding credit for life experience.

3. Local Level

a. Institutions should clearly communicate their policies of awarding advance credit to students through challenge exams or other procedures. Sending and receiving institutions should agree in writing on procedures to be adopted.

b. Appropriate staff members of cooperating institutions should meet periodically to exchange information on curriculum programs and requirements, identify common learning objectives, compare notes on their review procedures being used in awarding credit for prior learning experiences.

c. Procedures should be worked out whereby receiving institutions agree to accept credits previously awarded by the sending institutions. This suggests that all faculty concerned by jointly involved in the establishing of performance criteria for given courses in selected occupational fields.

d. Appropriate methods for charging students for advanced credit received through challenge exams or other means need to be worked out so that local institutions are not penalized for adopting more flexible credit awarding procedures.

SUMMARY

Articulation and coordination offer a possible way out from under the burden of the increasing cost of education. We can no longer afford strict institutional autonomy. While the present status of the consortium movement in higher education bodes well for the future, a comparable effort has yet to be carried out on behalf of postsecondary vocational education. There is a need for educational leadership in both sectors of postsecondary education to demonstrate a willingness to grapple with the issues of autonomy, centralized decision making, and bureaucratic demands. Resolving these issues will not be easy. But the potential return on the investment will fully justify the effort.

In the near term, it is likely that tensions between area vocational schools and community colleges will increase unless one or more of the recommendations presented in this chapter are acted upon quickly. Competition among segments of the public as well as the private sectors of education will increase and the desire to engage in cooperative ventures will be thereby lessened.

In the longer term, however, there is hope that a rational plan will ultimately triumph bringing with it a degree of control over runaway costs and limited student options. What this report has tried to demonstrate is that articulation is possible. Replication elsewhere of the models identified should be given serious consideration by the U.S. Office of Education for follow-up action. While we have been able to uncover a wealth of leadership among local institutions, positive support and reinforcement at the national level will help to insure an expanded program of articulation.

APPENDIX A

TRENDS IN EXPENDITURES AND ENROLLMENTS

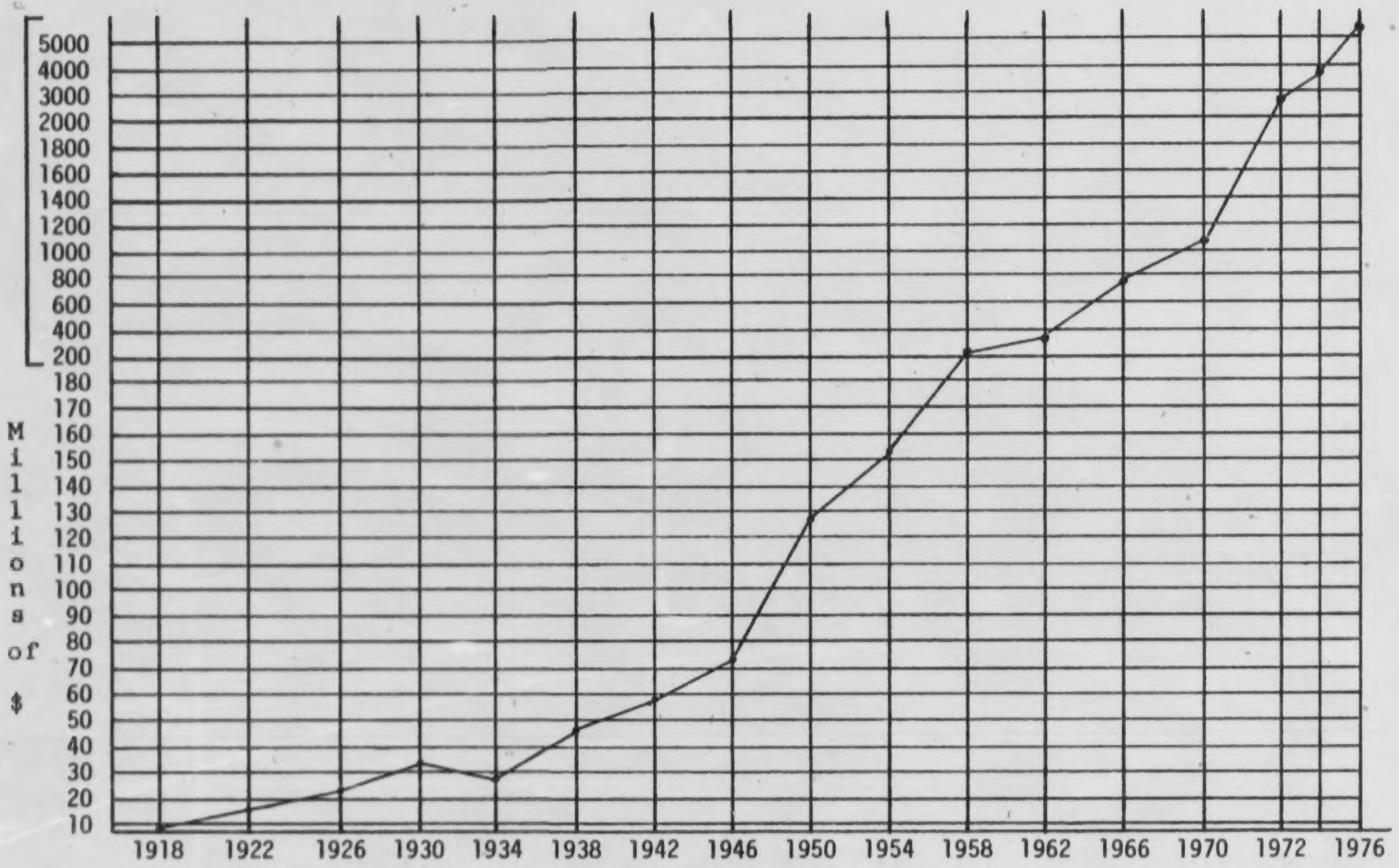

FIG. 3: Total Expenditures Vocational and Technical Education, 1918, 1976

SOURCE: Vocational and Technical Education Selected Statistical Tables 1918-1976.
US Department of Health Education and Welfare.

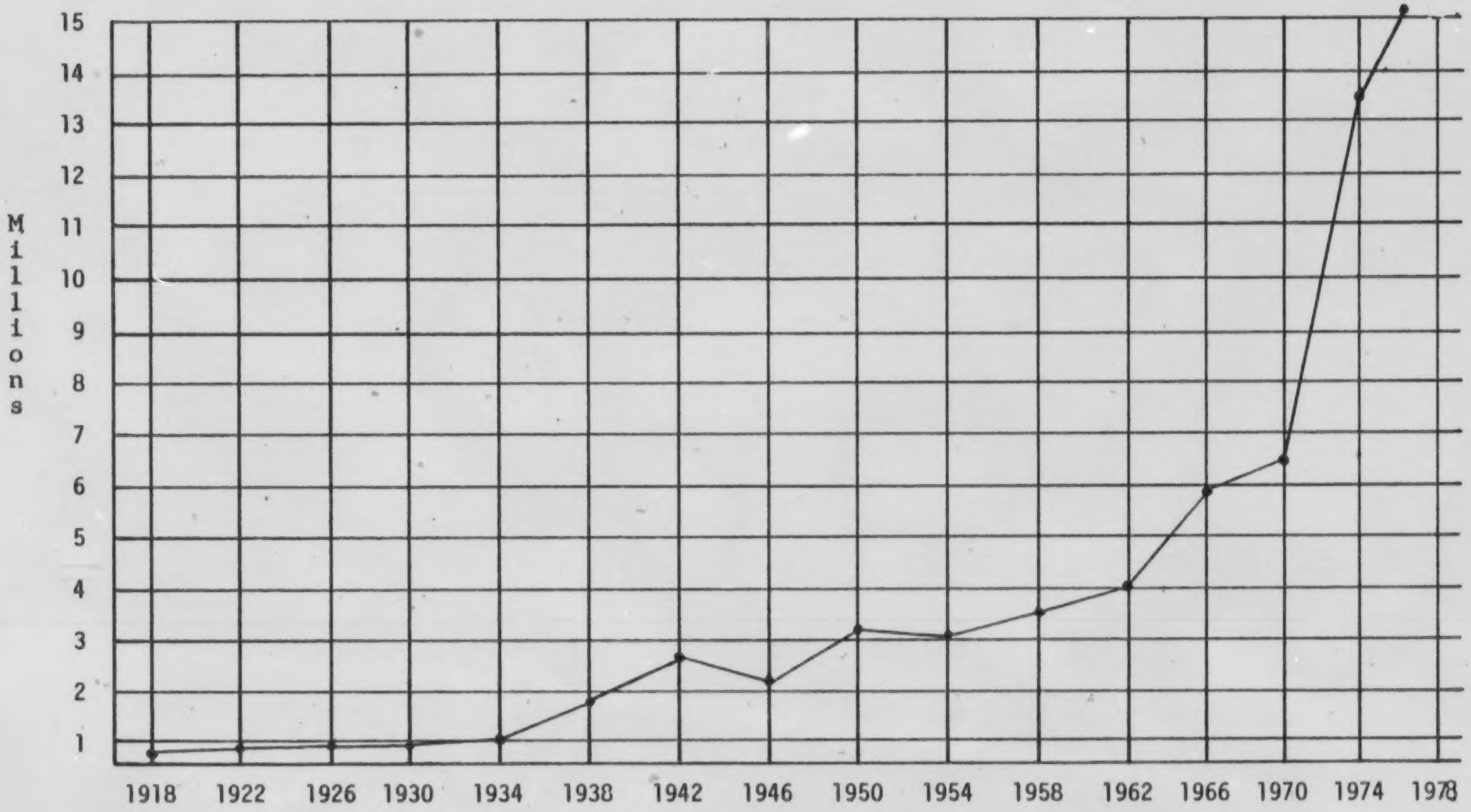

FIG. 4: Total Enrollments Vocational and Technical Education, 1918-1976

SOURCE: Vocational and Technical Education Selected Statistical Tables, 1918-1976.
U.S. Department of Health, Education and Welfare.

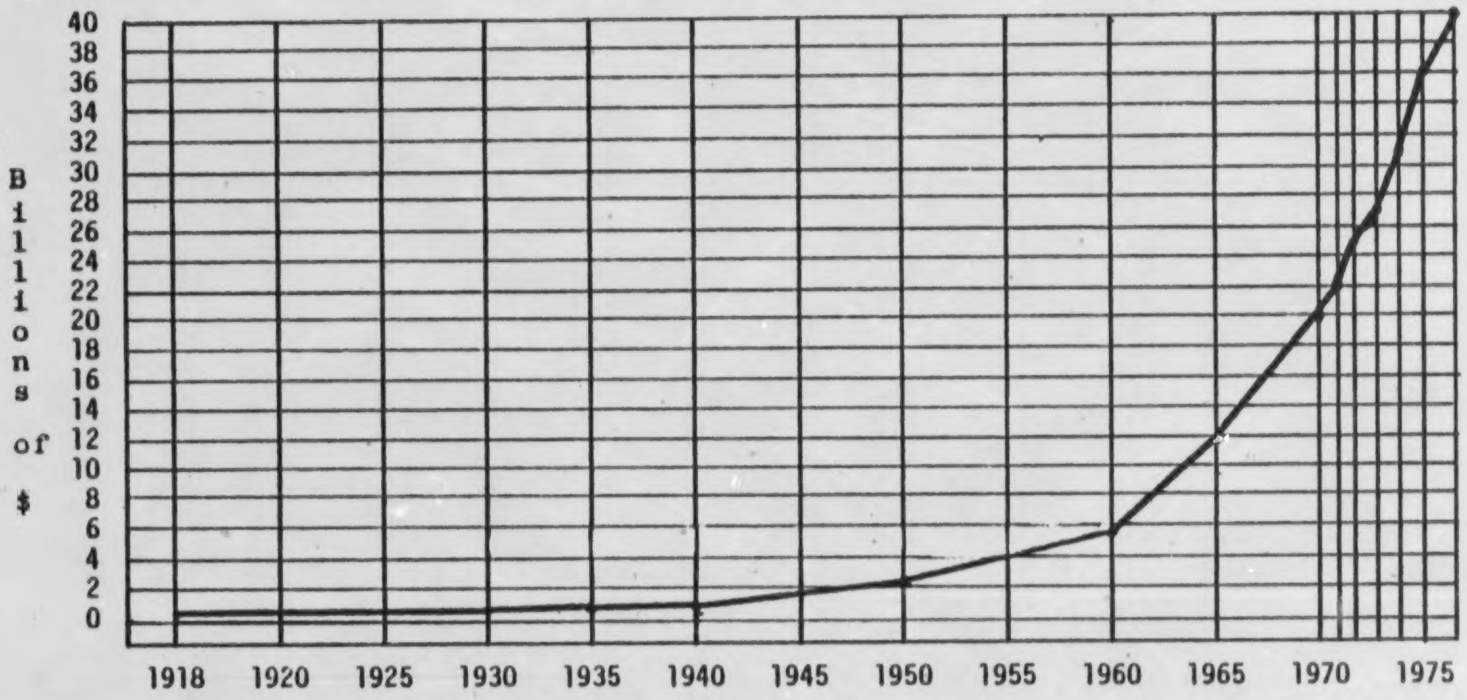

FIG. 5 : Total Expenditures Higher Education, 1918-1975

SOURCE: American Council on Education, A Fact Book on Higher Education, 1976 Edition

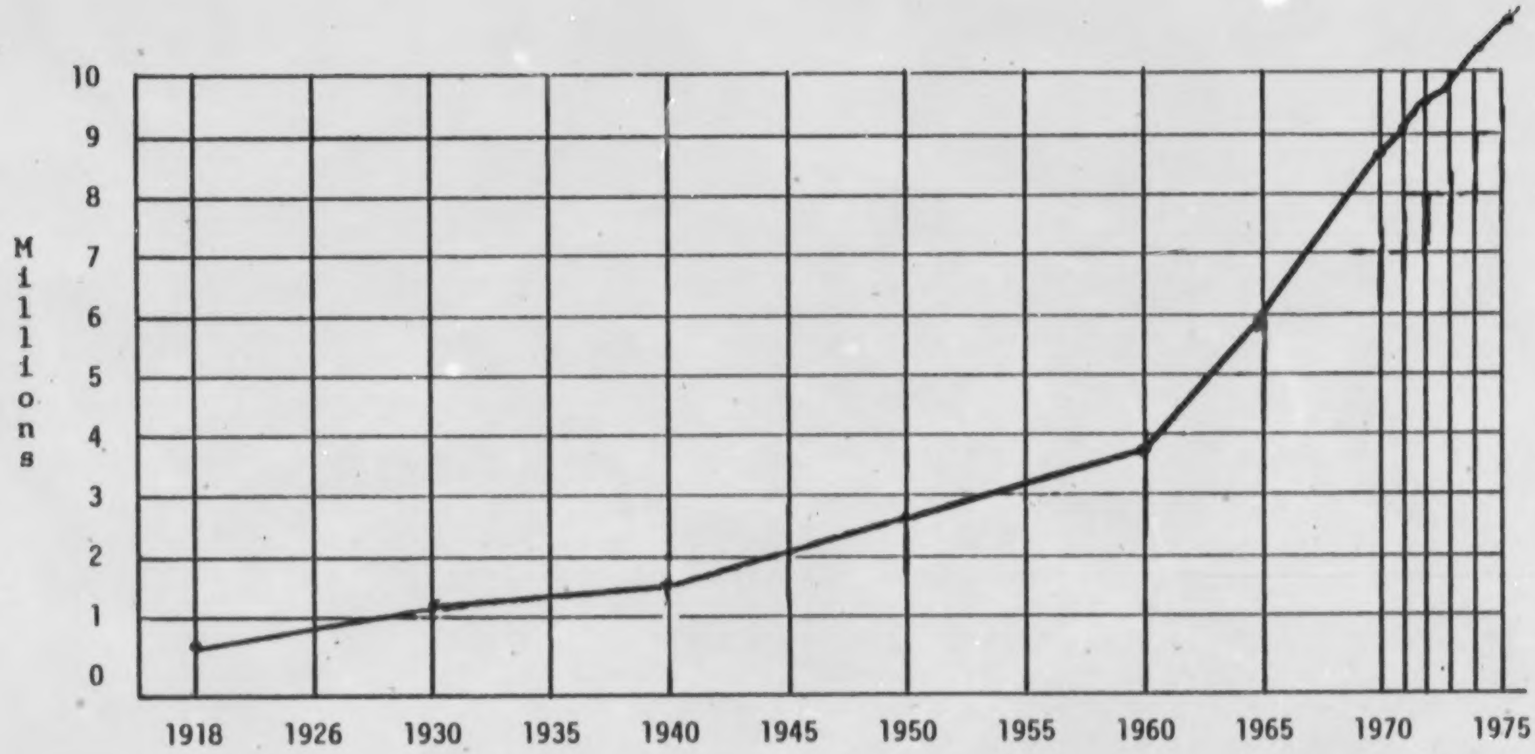

FIG. 6: Total Enrollments Higher Education, 1918-1975

SOURCE: American Council on Education, A Fact Book on Higher Education, 1976 Edition

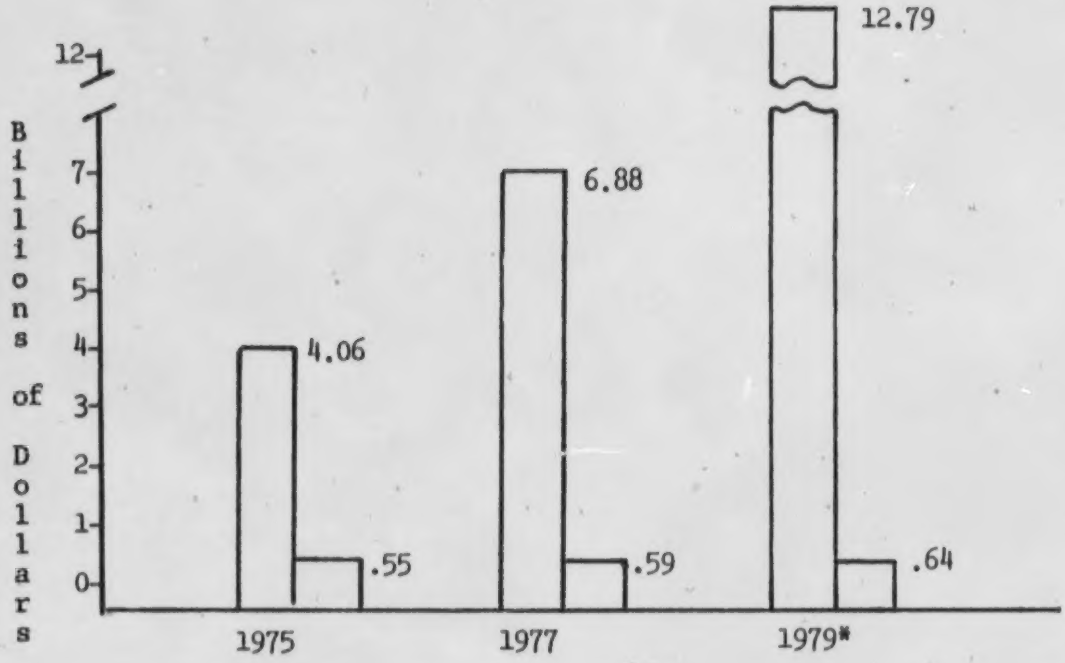

FIG. 7 Federal Vocational Education Appropriations Compared with Budget Outlay for Training and Employment, 1975-1979.

SOURCE: The Budget of the United States, FY 79, P. 485, and DHEW, USOE, and BOAE.

*1979 is an estimate.

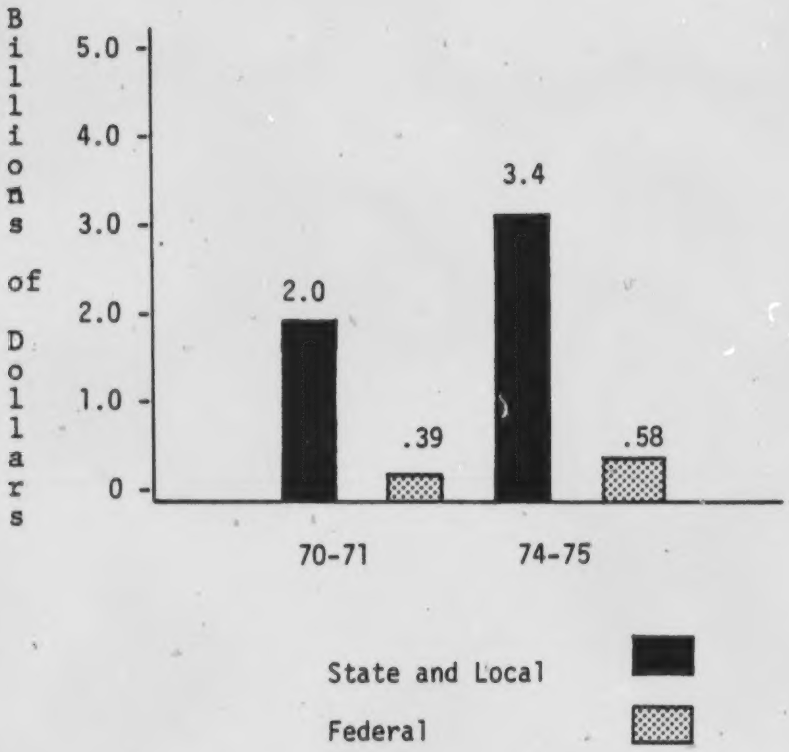

FIG. 8: Vocational Education Expenditures by State and Local versus Federal (1971,1975)

SOURCE: Project Baseline: Fifth National Report (Fiscal Year 1975)

APPENDIX B

MEMBERS OF THE NATIONAL ADVISORY COUNCIL

K. Patricia Cross	Senior Research Scientist Educational Testing Service
James A. Farmer	Associate Professor of Continuing Education, University of Illinois
Don C. Garrison	President Tri-County Technical College
Warren G. Hill	Executive Director Education Commission of the States
Barbara A. Jones	Chairman Department of Economics Clark College
Theodore A. Koschler	Vice President Emeritus Miami Dade Community College
Eugene Lehrmann	State Director Vocational-Technical and Adult Education
Paul J. Lowery	Superintendent Des Moines Area Community College
Dale Parnell	President San Joaquin Delta College
Maritza Samoorian	Director The Bryman Schools, Inc.
Victor Van Hook	Coordinator of Cooperative Programs State Department of Vocational-Technical Education
Charles O. Whitehead	President State Technical Institute at Memphis

APPENDIX C

COPIES OF LETTERS TO STATE DIRECTORS

American Vocational Association Inc. 1510 H Street N.W. Washington, D.C. 20005 (202-737-3722)

May 31, 1977

Dear :

As you may be aware, AVA and the American Association of Community and Junior Colleges have jointly undertaken to study the benefits to be derived from successful articulation of vocational program offerings at the local level. We are asking for your nomination of one or more local communities in your state where you feel successful collaboration between area vocational schools, community colleges, proprietary schools, etc. has been achieved. Once these locations have been identified, the AACJC/AVA Joint Study team will undertake to visit a selected number for the purpose of identifying those practices and benefits which make articulation desirable.

The following list of practices is offered as a guide for you to consider as you contemplate which communities to nominate. The following practices are suggested as selection criteria:

1. The existence of a written agreement between two or more local institutions stating how such institutions will collaborate in their effort to provide support for post-secondary vocational education.
2. The use of criterion referenced tests or other systematic assessment procedures making it possible to offer course credit to students who have already acquired specific knowledge and skills in a given area of vocational education.
3. Closely related to giving credit for already acquired knowledge and skills is the willingness of local institutions to accept the transfer of credits from another institution.
4. The use of follow-up surveys to ascertain how well students in those occupations for which they have been trained are doing.
5. The existence of joint planning committees and joint membership in advisory committees.

6. The provision of individual study opportunities and flexibly scheduled courses giving students access to programs when convenient for them.

7. Jointly sponsored community need surveys.

8. Procedures where key staff are provided release time to participate in joint planning sessions.

9. Shared counseling and job placement programs.

10. Budget review procedures giving key administrators the opportuning to review each other's budget requests.

These and other criteria which you may want to apply should serve as useful guidelines in your deliberations.

The ultimate goal of the Joint Study will be to study and publicize six or so promising community based programs for achieving articulation. Please send your nominations to the Joint Study Project Director, David S. Bushnell, Suite 410, One Dupont Circle, Washington, D.C. 20036. He and members of his Advisory Council will be scheduling their site visits during the coming summer months.

Thank you for your help.

Sincerely yours,

Lowell A. Burkett
Executive Director

Office of the President
American Association of Community and Junior Colleges

[illegible] 31, 1977

Dear :

As you may be aware, AACJC and the American Vocational Association have jointly undertaken to study the benefits to be derived from successful articulation of vocational program offerings at the local level. We are asking for your nomination of one or more local communities in your state where you feel successful collaboration between area vocational schools, community colleges, proprietary schools, etc. has been achieved. Once these locations have been identified, the AACJC/AVA Joint Study team will undertake to visit a selected number for the purpose of identifying those practices and benefits which make articulation desirable.

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One Dupont Circle/N.W./Suite 410/Washington/D.C. 20036/202-293-7050

6. The provision of individual study opportunities and flexibly scheduled courses giving students access to programs when convenient for them.

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Thank you for your help.

Sincerely yours,

Edmund J. Gleazer, Jr.

AMERICAN ASSOCIATION OF COMMUNITY AND JUNIOR COLLEGES/AMERICAN VOCATIONAL ASSOCIATION

AACJC/AVA
JOINT STUDY

David S. Bushnell
Director

May 31, 1977

Dear :

As you may be aware, the American Association of Community and Junior Colleges and the American Vocational Association have jointly undertaken to study the benefits to be derived from successful articulation of vocational program offerings at the local level. We are asking for your nomination of one or more local communities in your state where you feel successful collaboration between area vocational schools, community colleges, proprietary schools, etc. has been achieved. Once these locations have been identified, the AACJC/AVA Joint Study team will undertake to visit a selected number for the purpose of identifying those practices and benefits which make articulation desirable.

The following list of practices is offered as a guide for you to consider as you contemplate which communities to nominate. The following practices are suggested as selection criteria:

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The ultimate goal of the Joint Study will be to study and publicize six or so promising community based programs for achieving articulation. Please send your nominations to me at the address noted on the letterhead. Members of our Advisory Council and I will be scheduling our site visits during the coming summer months.

Thank you for your help.

Sincerely yours,

David S. Bushnell
Director

APPENDIX D

INTERVIEW SCHEDULE AND INSTRUCTIONS

GUIDE TO INTERVIEWERS

The purpose of this guide is to provide a brief set of procedures or instructions for you to follow as you gather the interview material on the attached form.

1. Please record all notes on front or backside of the pages contained in the survey instrument. If you are interviewing people from different institutions, please record their responses on a separate form or, if you elect to use the same form, in a different pen. This will enable to differentiate the responses of community college representatives from those of area vocational school representatives, high school representatives, etc.

2. You may want to state the purpose of the study as follows: "AACJC and AVA have jointly undertaken a study with support from the U.S. Office of Education which will identify and document successful cooperative working relationships among institutions offering post-secondary vocational and occupational education. We will be visiting twenty-two communities throughout the nation that have been identified by state directors of community colleges, vocational education, and executive secretaries of state advisory councils on vocational education as locations where articulation has been achieved. Results of the study will be written up and shared with people attending a series of regional conferences scheduled for late Fall and early Winter. By talking with you and your associates, we hope to be able to communicate to others how you achieved your goals."

3. Please note that the questionnaire is broken into five parts. You will not need to go over all questions with each interviewee. After you have familarized yourself with the instrument, you will need to pin down with your host just who on the staff or in the community can answer which questions. Please make sure that all questions are answered and that you are satisfied that you have provided a sufficiently detailed answer so that a professional writer later on can piece together your notes as part of a case study.

4. Once you have completed your interviews, one or the other member of your site visitation team will need to take it upon him or herself to integrate the notes of the two team members. Please do so as soon after your interviews as possible and mail to me.

5. The following detailed information has to do with specific items under Part I:

   a. Complete items #1 - 5.

b. Skip items #6 - 9. We will obtain such information from census reports.

c. Estimate current response to #10 using the following definitions:

   (1) Single - one company town

   (2) Limited - 2 to 3 major employers

   (3) Diversified - 4 or more major employers in different fields of activity

d. Estimate economic status of community (#11) based upon imigration patterns, level of employment, changing status of per-capita income, and number of new employers setting up businesses in the area.

e. Skip #12.

f. On #13, limit information to those institutions falling within the service area of the community college/technical college/area vocational center under consideration.

g. With reference to items #15 and 16, would like budgets for fiscal year 1976-1977 and 1970-71, if possible

Suggested List of People to be Scheduled for Interviews

Community College Representatives

1. Chancellor or District President
2. Vice-Chancellor for Business Affairs
3. Registrar
4. Dean of Instruction
5. Dean of Students
6. Director of Financial Aid
7. Director of Placement Services
8. Division Chairperson, Occupational Program
9. Two Instructors in Occupational Education
10. Five or so students enrolled in a Terminal Degree or Occupational Program
11. Two or so members of Vocational Advisory Committees

Area Vocational School or High School Representatives

1. Superintendent or School Director
2. Principle or Assistant Director
3. Vocational Education Coordinator
4. Two or so Faculty Members
5. Director of Placement or Head of Counseling
6. Five or so students

To cover these numbers of people in two days will obviously require splitting up the two site visitation interviewers. Please feel free to do so. Approximately 45 minutes will be required for each interview. We look forward to getting together.

Guide for Interviewer*

Interviewer	Page Number and Questions
1. President	5 (1), 6 (5), 12 (18), 14 (3) 16 (6), 17 (8), 22 (1,2), 23 (3), 24 (5,6
2. Director of Occupational Education	5 (2,3), 6 (4), 7 (7,8) 9 (11), 11 (16), 12 (17), 17 (9), 23 (3), 24 (5)
3. Director of Business Affairs	8 (9), 10 (13, 14), 13 (19), 15 (4) 18 (10), 23 (4)
4. Dean of Instruction	7 (6), 8 (10), 24 (5), 5 (2,3)
5. Registrar	12 (20), 14 (1,2), 15 (5), 16 (7), 20 (4)
6. Placement and Counseling Officer	11 (15), 19 (1,2), 20 (3), 21 (5)

Code: ( ) = Question Number
Non ( ) = Interview schedule page

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*This grouping of questions was suggested as a way of systematically covering all items on the interview schedule.

AACJC/AVA Joint Study Interview Schedule

Basic Statistical Data

1. Community ______ Region ______
State ______
County ______ Comm. Type ______

2. Personnel conducting visit ______
______

3. Dates of visit: from ______ to ______

4. Institutions visited: ______
______
______
______

5. Population: Community ______
County ______

6. Age of population (1970)	Community	County
10-14	______	______
15-19	______	______
20-24	______	______
25-29	______	______
30-34	______	______
35-39	______	______
40-44	______	______
45-54	______	______
55-64	______	______
65 & over	______	______

7. Minority Composition:	% Black	% Spanish	% Other
1970	______	______	______

8. Median family income:
1970 ______

9. Median years of education:
1970 ______

10. Economic base:

Single ______________ Specify: ______________________

Limited ______________ Specify: ______________________

Diversified ______________ Specify: ______________________

11. Economic Trends:

Down ____________ Specify: ______________________

Stable ____________ Specify: ______________________

Growing ____________ Specify: ______________________

12. Unemployment (% Total Population):

1970 ______________ 19__ ______________

13. Educational Institutions (Service Area of Community College or Equivalent):

a. Secondary Public: No. ____________
1) Enrollment (1970) ______________________
2) Enrollment (1977) ______________________

b. Public Post-Secondary:

No.		Enrollment 1970	1977
______	1) Area Vocational Schools	______	______
______	2) Community Colleges, Technical Colleges (Comprehensive)	______	______
______	3) Branch Campus	______	______
______	4) Four-Year College and University	______	______
______	5) Upper Div. College	______	______
______	6) Other (Specify)	______	______

c. Private Post-Secondary:

No.		Enrollment 1970	1977
______	1) Junior Colleges	______	______
______	2) Technical Institutes	______	______
______	3) Not-for-Profit Proprietary Schools	______	______
______	4) Four Colleges and Universities	______	______

14. % of High School Graduates Attending Some Form of Post-Secondary Educational/Training :

('70)______________% ('77)______________%

15. Public School Budget: (Operating Budget Only)

1970 $______________ 1976/77 $______________

16. Community College/Technical College Budget:

1970 $______________ 1976/77 $______________

Please Specify Fiscal Year ______________

17. County's Ten Largest Employers: (Located in Your Service Area)

Name	No. of Employees
a.______	______
b.______	______
c.______	______
d.______	______
e.______	______
f.______	______
g.______	______
h.______	______
i.______	______
j.______	______

18. Largest and/or Most Influential Craft, Service and/or Industrial Unions in County:

Part II

Input Questions

Institution:

Persons Interviewed:	Name	Title	Questions Pose
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			

1. Do representatives of the various vocational education programs and institutions in or outside your service area meet periodically for the purpose of articulating post-secondary vocational education course offerings?

__________ Yes __________ No How Often __________

Who Attends __________

Discussion:

2. To what extent do the institutions in your attendance area cooperate in carrying out periodic needs assessment in the community?

__________ Not at all __________ Some __________ Frequently

Who is surveyed?

__________ Employers __________ Recent Grads __________ High School Students __________ Adult

Discussion:

3. How does your institution decide which vocational programs to offer in your service area? __________ Employer surveys __________ Employer requests

__________ Local manpower projections __________ State or national manpower projections

__________ Student interest __________ Advisory Committees __________ Other

Discussion:

4. Do the institutions in your service area jointly publicize training programs and course offerings?

_________ Yes _________ No

Discussion:

5. Are there formal or informal articulation agreements between your institution and others in your service area?

_________ Yes _________ No

_________ Formal

_________ Informal

_________ Both

a. Which institutions? ______________________________

____

Discussion:

6. Does your institution jointly sponsor staff training programs or cooperate with other institutions in providing pre or in-service training?

_________ Yes _________ No Which Institutions ___________________

Discussion: ___________________

____

7. Where do you recruit most of your vocational-education teachers from?

_____________ Vocational Schools _____________ Proprietary School

_____________ High Schools _____________ Other Colleges

_____________ Private Sector _____________ Other

Discussion:

8. Where did most of your vocational education-administrators come from?

_________ High Schools _________ Private Sector _________ Other

_________ Other Colleges _________ Vocational Schools

Discussion:

9. How do your salary schedules stack up against other institutions in your service area?

__________ Same __________ Higher __________ Lower

Discussion:

10. Does your institution share or exchange teachers with other institutions in the area?

__________ Yes __________No

Discussion:

11. To what extent do you share classroom or training facilities?

_________ Not at all _________ Some _________ Extensively

Who with? ____

Discussion:

12. Do you share equipment?

_________ Not at all _________ Some _________ Extensively

Who with? ____

Does this arrangement cover repairs, maintenance, supplies? _____ Yes _____ No

Discussion:

13. Where do you get your financial support from?

__________ % Local District

__________ % State

__________ % Federal

__________ % Tuition and Fees

__________ % Other (Specify)

Discussion:

14. What tuition and/or charges must students pay at your institution?

a. Tuition __________ (per quarter, semester, ?)

b. Fees, lab charges, etc. ______________________ (per quarter, semester, ?)

c. Other ____

Discussion:

15. Approximately what % of your students are receiving financial aid?______________________%

Loans and Scholarships

__________ BEOG

__________ SEOG

__________ National Student Loans

__________ State Federally Insured Loan Programs

__________ Locally Sponsored Loan Program

__________ G.I. Bill

__________ State Scholarships

__________ Local Scholarships

__________ Law Enforcement Education Program

__________ Other (Specify)

Work Programs

__________ Fed. Coop Program

__________ Fed. Work-Study Program

__________ Local Work-Study

__________ Apprentice

__________ CETA

__________ Other (Please Specif

Discussion:

16. Do you have separate advisory committees for each of your occupational program area

__________ Yes __________ No If yes, how many?__________

a. Do you have an overall advisory committee?

__________ Yes __________ No

b. How often do your advisory committees meet?______________________

Discussion:

17. Do the members of your advisory committees sit on other institutional advisory committees? __________ Yes __________ No __________ Unsure?

If yes, where? ____

Discussion:

18. Does your institution work cooperatively with other institutions on proposal writing and/or joint fund raising efforts with other institutions in your attendance area?

__________ Often __________ Occasionally __________ Almost Never

Discussion:

19. Does your institution have any joint purchasing arrangements with other institutions in your attendance area?

_____________ Yes _____________ No

a. If yours is a multiple campus institution, does each campus handle its own procurement program or do they depend on a central purchasing office.

_____________ Each does its own _____________ Centralized

Discussion:

20. What numbers of full and part-time students do you enroll annually?

__________ Full-time __________ Part-time

a. Approximately what % are vocational-technically oriented? __________ %

b. What % are transfer (academically) oriented? _____________ %

PART III

Process Questions

1. Does your institution grant full credit to students transferring into your institution?

_____In a few areas _____In some _____In most

2. Do you award credits or provide advance standing to students with prior knowledge or skill?

_____None _____A few _____Some _____Many

a. If yes, describe how?

b. Who has responsibility for determining a students qualifications?

3. What type of awards are you authorized to grant?

_________Degrees _________Certificate _________Diplomas

Discussions:

4. Do you have contractual links with private vocational schools in your area?

_____Yes ______No

With whom?

a. What links do you have with CETA programs?

5. Can students jointly enroll in two or more institutions in your attendance area at the same time?

_____Yes ______No

a. If yes, which ones?

Discussion:

6. What types of vocational-technical courses/programs do you offer?

_____Pre-employment (entry level) training?

_____Supplemental to employment?

_____Apprenticeship.

_____Other (Please specify).

Discussion:

7. At what intervals may your students enroll?

_____Open entry?

_____Fall only?

_____Semester?

_____Quarterly?

Discussion:

8. To what extent is your vocational program coordinated with those of other institutions in your attendance area?

   a. How?

9. When your curriculum planning team sits down to develop a curriculum outline, do they involve representatives from other institutions?

   a. What arrangements are made to involve others?

   b. Who is involved?

10. When budgets are prepared, who develops them and who must approve them?

Part IV

Output Questions

1. What percent of your students achieve the goal they set for themselves when they first enrolled? ______________%

Discussion:

2. What percent of your students who complete their program of study are employed in the field for which they have trained?

______________%

3. Does your institution conduct follow-up surveys of recent graduates?

_____________ Every year _____________ Periodically _____________ Rarely

a. Who is surveyed ?

b. How often?

c. By whom?

d. What is done with the data collected?

4. Must your students demonstrate that they can meet certain performance criteria before they can graduate or receive certification in their field of training?

__________ In most programs __________ In some __________ In none

Discussion:

5. What job placement service does your institution offer to its graduates?

a. Who provides it?

b. Is it effective? If,yes, what do you base your judgment on?

Part V

Miscellaneous Questions

1. To what extent does your institution duplicate course offerings of other institutions in your service area in the following program areas:

	Considerably	Some	A Little	None
Vocational education				
Adult education				
College or academic education				
Avocational programs				

Discussion:

2. How accessible is your institution to residents in the community?

_______ Very _______ Somewhat _______ Not Too

a. Is there public transportation? _______ Yes _______ No

b. Is there sufficient parking? _______ Yes _______ No

3. What barriers do you see as preventing or hindering successful articulation among or between other institutions in your community? Fiscal, administrative, service, etc.?

4. What professional organizations do most of your vocational instructors belong to?

AVA ____________

AACJC ____________

ATEA ____________

AVERA ____________

NEA ____________

Other ____________

a. Who pays for dues or memberships?

5. Should vocational education be primarily concerned with:

   a. Job entry skill training only?

   b. Job advancement?

   c. Broader problem solving skills?

   d. Leisure time consumption?

6. Is your institution organized? Which union?

APPENDIX E

COPIES OF AVA AND AACJC JOURNAL EDITORIALS

ON

THE JOINT STUDY

American Vocational Association Jou
April 1977

Latest Word from Washington

Lowell A. Burkett

Editor-in-Chief
AVA Executive Director

AVA and the Postsecondary Program

Vocational education is a program with one basic purpose: to prepare individuals of all ages to enter and progress in the labor market. The American Vocational Association is committed to this basic purpose of vocational education and strives to further its goals through professional services rendered to AVA members. In other words, AVA is member-oriented, not institution-oriented. It seeks to serve vocational educators wherever they are, regardless of the type of institution or educational level.

AVA has been accused of neglecting one segment of vocational education—the postsecondary program—and there might be some surface truth to this charge. But if AVA has been delinquent in its services, it is not from a lack of concern for the postsecondary program. It would be more accurate to say that in the long history of vocational education, the postsecondary program is only now coming into its own, and AVA has been caught somewhere in the middle. To get a clear picture, one has to go back over the past fifteen to twenty years and review the development of postsecondary vocational education and the role that institutions have played in this development—the technical institutes, community colleges, and area vocational schools.

The oldest in the field is, of course, the technical institute. In the past, however, technical institutes have been somewhat selective in their offerings, having been concerned mostly with the training of engineering technicians. This has changed in recent years, and technical institutes are expanding their curriculums to include many other technologies. Community colleges, on the other hand, are relative newcomers to the field who virtually owe their growth to the public demand for more vocational education at all levels in all parts of the country. Most of us can recall when community colleges were almost unknown; the two-year colleges in those days were known as junior colleges, transfer institutions that offered a two-year academic program with perhaps a smattering of "commercial" subjects.

As the technical institutes and community colleges were building up their curriculums, area vocational schools were established in many parts of the country to fill the void where postsecondary programs were still in short supply. Once established, this development also gained momentum. The net result has been a tremendous growth of postsecondary vocational education, whose practitioners are now demanding a proportionate share of recognition in AVA activities and services. The first organized step to redress this imbalance was taken when AVA appointed its Commission on Postsecondary Education, which has been working on the problem since last October.

Collaboration With AACJC

Another step, along somewhat different lines but toward the same general goal, was taken last August when AVA signed a Memorandum of Agreement with the American Association of Community and Junior Colleges, pledging the two organizations to collaborate on a joint study of postsecondary vocational education. The study, funded by the U.S. Office of Education, is now underway, and I want to share some of the things we expect from this undertaking. The basic purpose of the project is to promote closer working relationships among community colleges, technical institutes, and postsecondary area vocational schools. Both AVA and AACJC have much to contribute to the improvement and expansion of postsecondary vocational education, and we believe that we can accomplish more by working together than each going our own way.

I know full well that vocational educators are capable of meeting the demand for quality vocational education, but the current pressure to squeeze more mileage out of the education tax dollar mandates that we exploit all local resources for vocational education. The failure to plan cooperatively and communicate effectively leads to duplication of course offerings, equipment, and facilities, and the students are the first to suffer. In our haste over the last 15 years to open up area vocational schools and community colleges and expand vocational curriculum offerings, we have not always recognized other programs at the community level that have something to offer. Vocational educators who have succeeded in bringing together and utilizing community resources deserve to be given recognition and credit. And that is what this study intends to do.

According to Webster, articulation can be defined as "the act of interrelating, of forming or fitting into a systematic whole." Translated into vocational education terms, articulation ought to be concerned with fitting vocational education activities into the larger community. Depending on which community one addresses, articulation might take place between secondary and postsecondary institutions; among area vocational schools, community colleges, technical institutes, and proprietary schools; or between local, state, and federally supported programs.

Pressures for articulation are being felt not only at the local level where the greatest need is, but also at state and federal levels. Both Congress and many state legislators have put themselves on record as favoring well-articulated efforts wherever they are found. Vocational educators are in a unique position under the legislative requirements of 1976 to offer leadership in this area.

I recognize that cooperative planning and articulated programs are goals not easily achieved. Most vocational educators work under severe pressure to deliver the new and expanded programs demanded of them, without engaging in the inventorying of local resources. Enrollment data and reports of expenditures, complex enough in themselves, are further complicated when several state agencies demand almost identical information in different ways. Needs surveys have to be conducted; one- and five-year plans developed; and annual budgets prepared. Because of the importance of enrollments in terms of reimbursed expenses, many vocational educators find themselves competing for the same students. Students enrolling in one program at one institution may find they are unable to transfer credits when they decide to finish their training at another institution. Plotting a course of study over an extended period involving two or more institutional settings could prove to be a hazardous undertaking for students caught in the crossfire between competing school systems.

Even more sobering is the fact that students who have completed high school are sometimes unsure about which career to follow. Many aspire to professional or managerial occupations, while we know from labor market projections that four out of five job openings in the next ten years will require less than a bachelor's degree. What kind of postsecondary vocational training to pursue, and where to pursue it, is heavily influenced by the availability of programs at the local level. We can substantially expand the career options available to students by encouraging local institutions to use all educational resources at their command, and by overcoming any artificial barriers that block their access to programs.

It is hoped that this new agreement between AVA and AACJC will lay the groundwork for collaboration at all levels in education. The 18-month study, under the direction of David S. Bushnell, calls for the identification of successful articulation efforts at the local level and the publicizing of these efforts through a series of regional conferences next fall and a national conference to be held early in 1978. Exemplary programs at the local will be nominated initially by state education staffs and other informed leaders in the field. Follow-up visits will be conducted by small teams of consultants who will identify and document administrative policies and practices that promote cooperation between local institutions. On the basis of their reports, the project will prepare a series of case studies to be shared at one or more of the five regional conferences. These cases will describe the characteristics and features of the successful collaborative efforts, the motivation behind these efforts, and the policies and practices that made them possible.

Each regional conference will be convened in five geographical locations for the purpose of presenting the results of the study to all who are concerned with postsecondary vocational education. Out of these workshops will emerge tentative conclusions and recommendations for consideration at the national conference scheduled for early 1978. A publication highlighting the results of the study and conference recommendations will be published and distributed nationally at the conclusion of the project.

One of the advantages to be derived from this study will be the cooperative relationships built up in the process. With this machinery in place, it should be possible to attack other problem areas that might profit from a cooperative approach.

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Community and Junior College
Journal, May 1977

AACJC Approach

Good "vibrations." That expression perhaps best describes the response to a pledge by the American Association of Community and Junior Colleges and the American Vocational Association to work together on a study of postsecondary vocational education. The collaborative effort was agreed upon earlier this year—with financial assistance provided by the U.S. Office of Education.

Many member colleges of AACJC have responded to an appeal for information on successful articulation efforts at the local level—and simultaneously have expressed approval of an endeavor that is perhaps somewhat overdue. We have reason to believe that members of AVA also welcome the initiatives taken by the two organizations in this important area.

"Both AVA and AACJC have much to contribute to the improvement and expansion of postsecondary vocational education, and we believe that we can accomplish more by working together than by each going our own way," writes Lowell Burkett, executive director of AVA, in the April issue of the *American Vocational Journal* . . . "The failure to plan cooperatively and communicate effectively leads to duplication of course offerings, equipment, and facilities, and the students are the first to suffer. . . ."

Burkett points out quite accurately that the rapid development of community colleges in the past 20 years has been a tremendous factor in the expansion of vocational education. At the same time, he noted, area vocational schools are responding to the need for less than collegiate programs beyond high school. And technical institutes and proprietary schools have also contributed to growth.

Despite the proliferation of new structures and programs for vocational/occupational education, the demand and the interest remains high. What needs to be done is to offer the right programs for the right people at the right time and in the proper places. Thus, the converging of two major national organizations in a sweeping effort to sort out priorities and consolidate resources would appear to be timely.

AACJC has gladly accepted the mantle of administrative and organizational direction for the joint study. The machinery is now in place and functioning smoothly. Case studies of successful collaborative planning efforts are now being compiled.

Bushnell Is Director

David S. Bushnell, who figured importantly in AACJC's forecast study of community colleges a few years back, is directing the project. A group of experts, impaneled to serve as an advisory council, has already met and suggested possible criteria for marking exemplary programs of vocational education.

The Council targeted a variety of problems and issues that must be considered in any attempt to bring cooperation among locally-based postsecondary schools and colleges into full bloom. The issue of funding, not unexpectedly, was near the top of the list. The role of state leadership was questioned. How does vocational education fit into the larger socio-political issues of the country? Are there new structures that should be contemplated in delivering education and training?

And they asked for definitions of vocational education and occupational education?

Consideration of these issues and various other problems will be ongoing as the study itself takes form. Main thrust of the examination will be that of identifying successful articulation efforts at the local level. There is no doubt but that cooperation exists in many places throughout the country—but no agency has a handle on the extent of it at this time. Thus, the study will provide invaluable information for planners at local, state and national levels. The staff is seeking nominations of exemplary programs from state education departments as well as other informed leaders in the field. Teams of experts will make field trips to examine and document policies and practices that promote cooperation.

The information gathered will not remain in a file in Washington. As a part of the project, regional conferences will be held next fall where the data will be shared with representatives of the various kinds of schools and colleges for which it has application. From these conferences will come recommendations for further action to be illuminated at a national conference early in 1978.

Successful completion of this project will increase the career options and insure greater access to appropriate training for millions of Americans. The experience may also lead to other significant national cooperative efforts in vocational education. We look forward to both prospects. ☐

Edmund J. Gleazer, Jr.

APPENDIX F

SCHEDULE OF SITE VISITATIONS

Location	Date	Interviewer
Peralta Community College, Oakland, CA	8/4-5	Bushnell Parnell
Bellevue Community College, Bellevue, WA	8/8-9	Bushnell Parnell
Mississippi Gulf Coast Jr. College, Perkinston, MS	8/15-16	Whitehead Koschler
Madisonville Community College, Madisonville, KY	8/17-18	Whitehead Koschler
Coffeeville Community Jr. College, Coffeville, KS	8/16-17	Bushnell Van Hook
Gradwohl School of Lab. Tech., St. Louis, MO	8/18-19	Bushnell Van Hook
Yavapai Community College, Prescott, AZ	8/22-23	Parnell Hill
Dixie College, St. George, UT	8/24-25	Parnell Corcoran
John Wood Community College, Quincy, IL	9/27-28	Lowery
Kellogg Community College, Battle Creek, MI	9/13-14	Bushnell Lehrmann
Tri-County Technical College, Pendleton, SC	9/27-28	Bushnell
Florida Junior College, Jacksonville, FL	8/30-31	Bushnell
Floyd Junior College, Rome GA	9/1-2	Bushnell Jones
Manchester Community College, Manchester, CN	10/6-7	Samourian Koschler
Kenebu Valley Vocational-Tech. Inst., University of Main Augusta, Waterville, ME	10/13-14	Bushnell
Fulton-Montgomery Community College, Johnstown, NY	10/4-5	Koschler
Somerset Community College, Somerville, NJ	9/20-21	Bushnell
Williamsport Area Community College, Williamsport, PA	9/22-23	Bushnell
Milwaukee Area Technical College, Milwaukee, WI	6/23-24	Bushnell Koschler
Iowa Central Community College, Ft. Dodge, IA	6/20-21	Bushnell Koschler
Tarrant County Community College, Ft. Worth, TX	7/18-19	Bushnell Garrison
Garland County Community College, Little Rock, AR	7/20-21	Bushnell Garrison

APPENDIX G
FOLLOW-UP INFORMATION

Requests for more details on the examples presented in Chapter 6 in the "State of the Art" section should be directed to the contact person listed below. Ongoing statewide programs can be found on p. 3.

FORMAL AND INFORMAL ARTICULATION ARRANGEMENTS

a. Coordinating Councils

Duval-Nassau Coordinating Council for Vocational Education
Florida Junior College at Jacksonville
21st West Church Street, Room 1508
Jacksonville, Florida 32202
(904) 358-1218, ext. 275

b. Formal Articulation Agreement

Somerset County College
P. O. Box 3300
Somerville, New Jersey 08876
(210) 526-1200
Thomas Green, Executive Dean
Academic and Student Affairs

c. A Contractual Common Market

John Wood Community College
1919 North 18th Street
Quincy, Illinois 62301
(217) 224-6500
Paul R. Heath, President

FOLLOW UP SURVEYS

a. Tex-SIS

Texas Educational Information Consortium
Kerens, Texas 75144
(817) 336-7851
Dr. James F. Reed, Executive Director

b. Placement Services

Iowa Central Community College
Fort Dodge, Iowa 50501
(515) 576-7201
Charles Magruder, Director of Placement

c. Sample Survey of College Leavers

Peralta Community College District
300 Grand Avenue
Oakland, California 94619
(415) 834-5500
Gary Howard, Director of Occupational Education

MODULARIZED CURRICULUM AND INDIVIDUALIZED STUDY

a. Career Clusters

Tri-County Technical College
P. O. Box 587
Pendleton, South Carolina 29670
(803) 646-3227
Dr. Kent Sharples, Dean of Instruction

b. Open Entry/Open Exit

Mississippi Gulf Coast Junior College
P. O. Box 27
Perkinston, Mississippi 39573
(601) 928-5211 (ext. 215)
Travis Ferguson, College Director
Vocational Education Programs

CREDIT TRANSFER

a. Nursing Career Ladder

Floyd Junior College
P. O. Box 30161

(404) 295-6321
Mrs. Belen Nora, Director of Nursing

b. Joint Enrollment

Gradwohl School of Laboratory Technique
3514 Lucas Avenue
St. Louis, Missouri 63103
(314) 533-9250
Marvin France, Administrative Assistant

JOINT PLANNING

a. Coordination Through Committee

Coosa Valley Vocational Technical School
112 Hemlock Street
Rome, Georgia 30161
(404) 235-1142
J. Derward Powell, Director

b. Kentucky's Cooperative Climate

Madisonville Area Vocational Technical School
Madisonville Community College
Madisonville, Kentucky 42431

(502)821-7070
Bill Hatley
Regional Director
Region 2, Box 608

(502)821-2250
Dr. Arthur Stumpf
Director, Madisonville
Community College

ONGOING STATEWIDE ARTICULATION PROGRAMS

a. Illinois' Model for Articulated Vocational Education (MAVE)

Education (MAVE)
320 East 161st Place
South Holland, Illinois 60473
(312) 596-1616
Marilyn J. Artis, Project Director

b. Michigan's Competency-Based Education Articulation Program

Michigan State University
410 Agriculture Hall
East Lansing, Michigan 48824
(517) 355-6580
Dr. Carroll H. Wamhoff, Director

c. Minnesota Statewide Curriculum Articulation Center

Frost and Manton
Maplewood, Minn. 55109
(612) 777-9251
W. Fred Fuehrer, Director

d. North Carolina's Occupational Education Articulation Program

James Sprunt Institute
Post Office Box 398
Kenansville, North Carolina 28349
(919) 296-1349
Carlyle P. Woelfer, Project Director

APPENDIX H

CONFERENCE SURVEY INSTRUMENT FOR ESTABLISHING PRIORITIES*

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*Adapted from the Texas A&M University's Guide to Student Articulation Between Secondary and Post-Secondary Education. For the full reference citation, see page 26 of this report.

NEEDED IMPROVEMENTS IN ARTICULATION PRACTICES:
A Survey

In the columns at the left, rate (check) the current status of each practice in your state. Before doing that, please indicate the type of organization or institution you represent.

(Check one.)

_____ Local community or institution

_____ State

_____ Other (please write in) ______________________________

No Problem	Good	Adequate	Needs Improvement	Non-existent	
					1. COMMUNICATION:
					1.1 State level (between local & state or state and state).
					1.2 Community level.
					1.3 Board or Trustee level
					1.4 Administrative level (within organization).
					1.5 Guidance/counseling staff.
					1.6 Local organizations.
					1.7 Other (please write in) ______________________________
					2. ARTICULATION ARRANGEMENTS (e.g., formal committees, written agreements, teacher exchanges):
					2.1 Periodic inter-institutional meetings of key staff.
					2.2 Specific instructional programs sharing information for planning purposes.
					2.3 Follow-up surveys and manpower information.
					3. CURRICULUM DEVELOPMENT:
					3.1 Joint advisory committees.
					3.2 Cooperative development of programs.
					3.3 Complete check lists jointly prepared.
					3.4 Specialized courses offered for students enrolled in cooperating schools.

No Problem	Good	Adequate	Needs Improvement	Non-existent	
					3. CURRICULUM DEVELOPMENT (cont'd):
					3.5 Other (please write in)________________________________
					____
					4. RECRUITMENT OF STUDENTS:
					4.1 Joint publicity (P.R., etc.).
					4.2 Presentations to local high schools.
					4.3 Printed information (catalogs, brochures, etc.).
					5. COORDINATION OF PROGRAMS
					5.1 Area/regional/statewide planning.
					5.2 Sharing resources (facilities, staff, equipment).
					5.3 Cooperative in-service training.
					5.4 Within state or area planning/efforts.
					5.5 Determine who should provide new programs.
					6. GUIDANCE AND COUNSELING
					6.1 Orientation activities and experiences for counselors.
					6.2 Program familiarization.
					6.3 Inter-institutional inservice.
					7. ENTRANCE
					7.1 Entrance into institution.
					7.2 Entrance into program.
					7.3 Multi-level admission personnel
					7.4 Placement (interviews, tests, etc.)
					7.4.1 Regular
					7.4.2 Advanced

No Problem	Good	Adequate	Needs Improvement	Non-Existent	
					8. STUDENT APPRAISAL:
					8.1 Determine uniform standards (clock hours, credit hours or demonstrated competencies).
					8.2 Credit for life experiences.
					8.3 Determine completion requirements (by program).
					8.4 Continuance record system.
					9. DEVELOPMENTAL AND SPECIAL PROGRAMS:
					9.1 Deficiency removal.
					9.2 Special schedule availability (regular, evening, summer).
					9.3 Special services (tutors, volunteers).
					9.4 Handicapped/Disadvantaged special classes.
					10. CONTINUING EDUCATION PROGRAMS
					10.1 Basic vocational skills training.
					10.2 Retraining or supplemental training.
					10.3 Adult literary skills.

ONCE YOU HAVE CHECKED THE CURRENT STATUS OF EACH ARTICULATION PRACTICE IN YOUR STATE, GO BACK AND CIRCLE THE 3 PROBLEMS WHICH YOU WOULD LIKE TO WORK ON DURING THE CONFERENCES.

APPENDIX I

EXAMPLES OF INTER-AGENCY AGREEMENTS AT STATE AND LOCAL LEVELS

EXAMPLE I: Kentucky's Inter-Agency Memorandum of Agreement on Post-Secondary, Vocational-Technical Education

The demand for post-secondary vocational-technical education is rising rapidly in the Commonwealth, and although the area vocational schools, the University of Kentucky Community College System the public four-year college and universities, some of the independent colleges, and the proprietary schools are all involved in providing programs of post-secondary, vocational-technical education, the demand still exceeds what is currently available.

Resources for development and expansion of such programs are limited in both public and private sectors. In the case of the public institutions, funds derive primarily from state and federal sources, and the increasing demands upon the financial resources for public education make it imperative that there be a high degree of coordination and cooperation in the planning and administration of vocational and technical education programs to achieve the greatest returns on the tax dollar invested by the public in support of this area of education.

Agency Responsibilities

The State Board of Education is vested with the authority to carry out the purposes of the program of vocational education and the provisions of the Acts of Congress--(KRS 163.030). This includes responsibility for the development of an annual "State Plan for the Administration of Vocational Education" which includes various post-secondary vocational programs. The Vocational Act of 1963 and subsequent acts concerning vocational programs have taken recognition of the roles of community colleges in providing programs of technical education. Funds appropriated under these Acts are eligible for support of technical programs in community colleges.

The Council on Public Higher Education is vested with the responsibility of developing comprehensive plans for public higher education which meet the needs of the Commonwealth. "The plans so developed shall conform to the respective functions and duties of the state colleges and universities, the community colleges and the University of Kentucky as provided by statute. The Council shall for all purposes of federal legislation relating to planning for public higher education, be considered the 'single state agency' as that term may be used in federal legislation"--(KRS 164.0202). The term 'single state agency' applies also to the State Board of Education in the Vocational Education Act of 1963 and its amendments pertaining to the development of an annual "State Plan for the Administration of Vocational

Education." This responsibility is exercised under mandate of the Act and for the management and control of programs, services, and activities supported by the provisions of the Vocational Education Acts and the State Plan.

Need for Coordination

The need for coordination of post-secondary, vocational-technical education is generally recognized in Kentucky, and the satisfaction of this need falls heavily and primarily upon the State Board of Education and the Council on Public Higher Education, the two public bodies having responsibilities legally assigned and mandated.

To effect coordination between these two bodies, aware of the responsibilities of each agency, a Memorandum of Understanding and Agreement is drawn, adopted, and subscribed to cooperatively by these two public agencies and their chief administrative officers.

This Memorandum will serve to provide guidelines for more effective planning, development, and coordination of post-secondary, vocational-technical education in the Commonwealth.

Programming

1. The staff of both the Board and the Council will cooperate in a comprehensive review and assessment of the needs, status, and direction of vocational and technical education in Kentucky with the view of preparing a statewide plan for the orderly, systematic, and coordinated development of programs as deemed necessary to meet the needs of the people of Kentucky in this area of education. This plan will particularly give attention to the relationship between educational programs to be offered at the secondary level and those to be offered at the post-secondary level in order that any unnecessary duplication or overlap will be avoided in the development of secondary and post-secondary programs of vocational and technical education in the future.

2. The Board shall maintain a system for gathering manpower supply and demand data and will convey such data to the Council.

3. The Council will make reports to the Board on the financing, enrollments, and similar aspects of those programs for which the Board provides supplemental federal funding and will share results of research as may be appropriate and useful.

4. The development of vocational and technical education programs that require college level education earning college credits which lead to an associate degree or a higher college degree or a certificate issued by an institution of higher education under the coordination of the Council.

5. Educational programs requiring the completion of a certain number of clock-hours of training or an approved competency test score for licensing by a particular State licensing board or certification approved by the State Board of Education and not requring college level education will be the responsibility of the state vocational-technical schools and area vocational education centers which are under the jurisidiction of the Board.

6. Programs of vocational and technical education leading to an associate degree or certificate issued by an institution of higher education may be eligible for supplemental federal funding by the Board in accordance with terms of a contract between the Board and the Council.

7. The Board and the Council will work cooperatively to avoid needless replication* which results in an oversupply of trained manpower and ineffective use of available financial and physical resources.

8. Cooperative efforts to utilize facilities to their maximum capacity will be made. Through cooperative agreements between institutions, the joint use of facilities for secondary, post-secondary (non-degree) and post-secondary (degree) programs will be encouraged.

9. Although programs operated by the Board are not college level prepration, a sequential approach to education will be supported that encourages the institutions of higher education to evaluate each program for possible credit when an individual student desires to transfer to a degree program.

Funding of Programs

1. The Council will recommend budget funds for the primary support of vocational and technical education programs offered at the community colleges, technical institutes, and other institutions in the State system of higher education to the extent of available state and federal financial resources and will anticipate supplemental federal funding for post-secondary vocational and technical education programs form the Board as needed and as may be available.

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*For purposes of the Kentucky State Board of Education, this means "duplication."

2. The Board will budget a portion of its funds received from federal sources for post-secondary vocational and technical education to supplement the funding of post-secondary programs offered in the Kentucky state system of higher education. The number of post-secondary educational programs being offered and the number of students enrolled and receiving education in these programs at community colleges, technical institutes, and other institutions in the State system of higher education will be taken into consideration in the Board's determination of the amount of federal funds to be allotted to supplement the funding of post-secondary programs.

3. The Board will contract with the Council for the amount of funds allocated to supplement the funding of post-secondary programs. The Council will assume responsibility under terms of the contract to allocate the funds to provide supplemental support of bona fide programs consistent with federal laws and regulations.

4. The Board, acting as the designated state agency for the Federal Vocational Education Act of 1963, as amended, will contract with the Council for that portion of federal funds received for allotment and expenditure for supplemental funding of post-secondary vocational and technical education programs.

5. The contract between the Council and the Board will be negotiated earlyin the spring of the year to allow for planning and budgeting to assure the best use of the funds by various institutions which are eligible to receive supplemental allocations. (Federal funds included in the contractual agreement will be contingent on the date of the annual approval of Federal appropriations of Vocational education funds to the State.)

Review and Assessment

A review and assessment shall be made at least biennially of the extent to which the purpose of this Memorandum has been achieved in developing a statewide plan for post-secondary vocational-technical education, the general coordination of programs, the overall programming to meet identified needs, and the effectiveness of program funding.

Based on this review and assessment, an evaluation report including recommendations will be submitted to each agency.

If at any time the evaluation indicates the desirability of a revised or new Memorandum of Understanding and Agreement, both agencies will consider a revision of this document.

Mechanism for Implementation

To implement the provisions of this Memorandum of Understanding and Agreement a mechanism is required. Accordingly, a continuing committee representing the Board and the Council is to be formed through appointment by the two agencies. The composition of this joint committee shall come predominantly from those post-secondary insitutitions eligible for federal funding under existing legislation and under, this Agreement.

This committee is expected initially to develop proposals for the consideration of the two agencies on such items as:

1. A dictionary of post-secondary vocational-technical programs
2. Roles of the agencies in adult and continuing education
3. Procedures for program funding to include Federal vocational funds, state funds, and Title X funds
4. Roles of the agencies pertaining to Title X of the Higher Education Act of 1972 (when implemented)
5. Determination of manpower data needed for program planning
6. Roles of the agencies in planning for vocational-technical programs
7. Roles of the agencies and institutions in program evaluation.

The purpose of this Memorandum of Understanding and Agreement is to record certain interpretations, understandings, and agreements for a close working relationship between the Board and the Council and their respective administrative offices in the conduct of activities relating to vocational and technical education. It is intended that activities shall be carried out on a contract basis between the Board and the Council and in an interagency administrative relationship to avoid overlap, duplication, or confusion in the planning and development of programs of vocational and technical education.

Nothing in this agreement shall preclude cooperative arrangements by both parties to meet special occupational training needs of the people of the state; however, any major departure from the provisions of this Memorandum of Understanding and Agreement will require the joint approval of both parties.

We, the undersigned chief administrative officers of the two agencies referred to herein, recommend the ratification of this Memorandum of Understanding and Agreement by the respective agencies.

/s/ Lyman V. Ginger
State Superintendent of Public Instruction
Date: December 4, 1974

/s/ A. D. Albright
Executive Director
Council on Public Higher Education
Date: October 14, 1974

Ratified

/s/ Samuel Alexander
Secretary, State Board of Education
Date:

/s/ Frank H. Hood
Chairman, Council on Public Higher Education
Date: October 24, 1974

EXAMPLE II: New Jersey's Recommended Format for Joint Program Agreements Between Community Colleges and Area Vocational-Technical Schools*

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*Recommended by The New Jersey Department of Education, Division of Vocational Education. For further information, contact either Henry Tornell, Director, Post-Secondary Education at (609)292-9874 or John Grieco, Director, Technical Education at (609)292-6570.

Agreement Between
The Community College
And
The County Vocational-Technical School

GENERAL AGREEMENT FOR JOINT EDUCATIONAL PROGRAMS

I. A Commitment to [illegible] Career Needs of Students

This agreement is a result of the on-going relationship that exists between the Community College and the County Vocational-Technical School. The agreement is to act as a formal statement to assert the institutions' commitment to provide students with career preparation in an era of limited financial resources.

The Community College and the County Vocational-Technical School agree to provide for joint programs which are to be operated as a cooperative endeavor by the two institutions.

The intent of this agreement is that after successful completion of a prescribed curriculum, students will be eligible to receive a certificate of achievement, a diploma, or an Associate of Applied Science degree. In addition, students who meet the requirements for any of those three options should be qualified to continue their education and/or training in a transfer program or immediately enter into gainful employment in their general area of preparation. It is the commitment of both institutions that these goals be achieved in a cooperative and efficient manner, with as much attention and effort devoted to the success of this program as that devoted to the other activities at each institution.

II. Purposes of the Joint Agreement

This joint agreement has the following three purposes:

A. To encourage cooperative efforts between the Community College and the County Vocational-Technical School in planning and implementing appropriate joint educational programming.

B. To provide the community with career-oriented educational programs as needed while maximizing the efficient utilization of existing facilities.

C. To serve as a basis for postsecondary facility and postsecondary curriculum development within the context of long-range planning for such joint programming.

III. General Guidelines for Operating Jointly Offered Programs

The following considerations provide a legal and workable framework for the operation of jointly offered postsecondary programs.

A. A Commitment to Cooperation

All decisions which affect the operation of the programs covered by this agreement, will be based upon input obtained from both institutions.

B. Initial Policies Proposed for Ratification

Policies for the joint programs will be initiated by a Joint Board Liaison Committee consisting of two members from each Board. Such policies shall become effective following ratification by the Vocational Board of Education and the College Board of Trustees.

C. Special Requirements of the Associate Degree

By statute, the College is authorized to grant the associate degree. In keeping with the statute and the guidelines of the Middle States Regional Accrediting Agency, the college must formally approve the academic requirements and standards for a jointly offered associate degree program and courses within such a program.

D. Special Requirements of the Diploma and Certificate of Completion

By statute and regulation, County Vocational-Technical Schools are authorized to grant the diploma and certificate of completion. Courses for these credentials will be selected by the County Vocational-Technical Schools in consultation with the Community College.

IV. Administration of Joint Programs

A. The Two Governing Boards to Approve and Amend the Agreement.

Policy decisions, including any proposed alterations and/or additions to this agreement, must be approved by the governing boards of both institutions. (Please see the flow chart at the end of this Agreement.)

A single Joint Administrative Council will be established and charged with the administrative responsibilities inherent in the operation of jointly offered postsecondary programs. In addition, a Joint Curriculum Committee will be appointed for each joint program.

The composition, method of appointment, and responsibilities of each type of committee are outlined elsewhere in this agreement.

B. Joint Functions of the Two Institutions

Jointly, the institutions are responsible for the following functions:

1. recruiting and counseling students.

2. admitting all students for such joint programs in accordance with established admission requirements. (If a particular joint program is oversubscribed, the College will work closely with the County Vocational-Technical School to determine the criteria for student admissions. The College will also review the qualifications of students recruited by the County Vocational-Technical School for any of the joint programs.)

3. planning and instituting an integrated schedule of courses and the appropriate scheduling of facilities.

4. encouraging joint program students to participate in the extra-curricula activities available at both institutions.

5. encouraging students to use the library facilities of both institutions. (However, the library at the County Vocational-Technical School will be for reference only.)

6. providing for annual evaluation of each joint program.

C. Unique Functions of the Community College

The Community College, in consultation with the County Vocational-Technical School, is responsible for the following unique functions:

1. maintaining all student records. (A copy is to be provided to the County Vocational-Technical School at the end of each semester).

2. producing all class rosters and student schedules.

3. assigning all academic advisors.

4. administering tuitions and fees;

5. recruiting, selecting and evaluating faculty that teaches those joint program courses offered at the College.

6. providing remedial assistance to as many students as required.

D. Unique Functions of the County Vocational-Technical School

The County Vocational-Technical School, in consultation with the College, is responsible for the following unique functions:

1. recruiting, selecting, and evaluating faculty that teaches those joint program courses offered at the County Vocational-Technical School.

2. determining and providing laboratory supplies required for joint program laboratory courses offered at the County Vocational-Technical School.

3. maintaining skill identification records.

V. Joint Administrative Council

A. The Role of the Joint Administrative Council

The Council will have charge of the operations and long-range planning of the programs.

All decisions and actions of the Joint Administrative Council are subject to immediate review by the chief executive officers of both institutions, either of whom may exercise a veto. In the event a veto is exercised, the Joint Administrative Council will meet with the chief executive officers to resolve the problem.

B. Membership of the Joint Administrative Council.

The membership of the Council shall include:

a. Two (2) members appointed by the College, and

b. One (1) member appointed by the County Vocational-Technical School.

Appointment to the Council shall be for two years and may be renewed. The Chairperson will be elected by the three (3) member Council.

C. Responsibilities of the Joint Administrative Council.

The Joint Administrative Council will:

1. Recommend changes and/or additions to the policies governing the operation of joint programs to the appropriate level of administration at each institution. To become effective, such policy recommendations must be approved by the governing boards of both institutions.

2. Plan and coordinate the operation of the joint program, including: (a) supervising the Joint Curriculum Committees; (b) course scheduling; (c) facilities utilization; (d) budget recommendations and administration; (e) approving members of the Career Program Advisory Committees; and (f) other coordinating activities as become necessary.

3. Hold regular meetings according to a mutually agreed upon schedule. At a minimum, meetings of the Joint Administrative Council will be held at the conclusion of each academic semester.

4. Prepare an annual report describing the operation, including an evaluation, of all the joint programs. The report is to be submitted to the chief administrative officer of each institution.

5. Determine the admissions standards for each of the joint programs.

VI. Joint Curriculum Committees

A. The Role of Joint Curriculum Committees

A separate Joint Curriculum Committee will be established to supervise, coordinate and facilitate the academic growth of students in each specific joint program. Individual members may serve on more than one Joint Curriculum Committee.

B. Membership of Joint Curriculum Committees

A minimum of one (1) member from each institution shall serve on a joint curriculum committee. In all cases each institution shall have equal representation.

Appointments will be made by the chief executive officer of each institution for a one-year term coinciding with the fiscal year.

Two (2) members of the Joint Curriculum Committee, one from each institution, will be designated as Program Coordinators.

C. Responsibilities of Joint Curriculum Committees

Joint Curriculum Committees will:

1. Recommend to the Joint Administrative Council at which location courses in the joint program should be offered. (Generally, but not exclusively, laboratory courses will be offered at the Vocational-Technical School.)

2. Provide for the coordination of lecture-laboratory courses when the components are offered at separate institutions.

3. Recommend to the Joint Administrative Council the acquisition of specialized laboratory equipment, as needed by the joint program.

4. Maintain and update course outlines, syllabi, and laboratory experiments; and select with faculty advice, textbooks for the specialized courses in the joint program.

5. Orient faculty who are teaching a joint program to curriculum considerations important to the students enrolled in that program.

6. Recommend appropriate course and/or curriculum changes to the Joint Administrative Council.

7. Nominate members for Career Program Advisory Committees to the Joint Administrative Council. (Each joint program will have a Program Advisory Committee with members jointly appointed by the governing boards of both institutions.)

8. Hold regular meetings, the minutes of such meetings to be sent to the membership of the Joint Administrative Council.

9. Review, in consultation with the faculty, the academic status of joint program students at the conclusion of each academic semester.

VII. Career Program Advisory Committees

A. The Role of Career Program Advisory Committees

A Career Program Advisory Council advises a teacher in a specific joint program of ways that program can be relevant to the needs of prospective employers and employees.

B. Membership of Career Program Advisory Committees

Members are jointly appointed by the governing boards of both institutions.

Nominations for membership are submitted for approval of the Joint Administrative Council before consideration by those governing boards. Nominations will be made by: the chief executive officer of each institution; Joint Curriculum Committees; and the County Career Education Coordinating Council.

VIII. Joint Educational Program

A. Student Outcomes: A.A.S. Degree, Diploma, or Certificate of Completion

For all joint programs the College will award only the Associate of Applied Science Degree while the County Vocational-Technical School will award the certificate of completion and the diploma.

Students who successfully complete the requirements will receive the Associate of Applied Science Degree offered by the College in conjunction with the County Vocational-Technical School. The A.A.S. for any of the joint programs will consist of at least 60 college credits.

The associate degree credential will read "an Associate of Applied Science award by the Community College in conjunction with the County Vocational-Technical School." The credential will be signed by the President of the College, the Superintendent of the County Vocational-Technical School and by the Chairpersons of the respective institutions' Board of Trustees.

Students who successfully complete the requirements will receive the certificate (30 college credits) and/or diploma program (45 college credits) as offered by the County Vocational-Technical School in conjunction with the College. The diploma and certificate of completion credentials will read: "diploma or certificate of completion awarded by the County Vocational-Technical School in conjunction with the Community College." These credentials will be signed by the President of the College, the Superintendent of the County Vocational-Technical School and by the Chairpersons of the respective institutions' Board of Trustees.

B. Scheduling

Programs and courses are scheduled to deliver courses on a ten month basis. If funds are available, the schedule of courses will be extended to a year-round basis. The scheduling of required courses will be cooperatively developed each semester by the Joint Administrative Council.

Changes in scheduling and/or classroom or laboratory assignments will not be made during any semester unless the change is agreed upon by the Joint Administrative Council.

C. Daily Supervision of Joint Programs

The College's chairperson of the division in which the joint program is being offered is responsible for the daily operation and supervision of the program in consultation with the Program Coordinator of the County Vocational-Technical School.

D. Credit Hours

The credit hour requirements for the associate degree, the diploma and the certificate of completion will meet the requirements set by the Joint Administrative Council. These requirements will meet the minimum standards set by all state agencies.

E. Efficient Use of Facilities

Generally, core courses of the program which include laboratory experimentation will be held at the County Vocational-Technical School, while supportive liberal arts and elective courses will be held at the Community College.

F. Efficient Use of Teaching Faculties

The College will teach all the general education and liberal arts courses while the County Vocational-Technical School will teach all the laboratory courses, technical mathematics and technical physics.

G. Status of Credits

All courses offered in the joint program will be considered college level courses bearing transferable college credits.

IX. Financial Arrangements

A. Tuition and Fees

Joint program students will pay tuition and fees in accordance with the schedule in effect at the College.

B. Enrollment Statistics

Students will be counted and reported to the State Department of Higher Education as "college students in joint programs." Students will also be counted and reported to the State Department of Education, Division of Vocational Education, as "postsecondary vocational education students in joint programs not necessarily leading to the baccalaureate degree."

C. Student Contact Hour as Measurement Unit

The basic unit of measurement of academic activity within a joint program will be the student-contact hour, which is defined as the product of the number of students (tenth day statistics) by the weekly contact hours, taken on a course section by course section basis.

D. Financial Relationship

At the conclusion of each quarter, the total student-contact hours for joint programs will be tabulated and the percentage generated by each institution will be calculated.

Operating revenues generated by the joint programs will then be assigned to each institution on the basis of the percentage. Revenues shall include student tuition, fees, FTE funds and vocational education funds received from appropriate state offices.

E. Adjustments Possible in Shares of Financial Support

Recognizing that one or the other institution may incur extraordinary expenses in the operation of a joint program, the chief financial officers of each institution will meet with the Joint Administrative Council at an appropriate time in each fiscal year.

If an adjustment to the calculated percentages is deemed appropriate, such recommendation will be made to the chief executive officers of each institution.

F. Library Support

To develop and enhance the present library holdings at the County Vocational-Technical School, each institution will be responsible for identifying one-half of the books which are to be purchased. In addition, each institution will contribute $2,000 towards the purchase of new library holdings for the County Vocational-Technical School for each fiscal year during the first five years this Agreement is in force.

G. Private Funding Support to Be Sought

Private funding sources will be contacted on a joint basis and such revenues will be used to develop and enhance the joint programs.

X. Program Evaluation

A. Annual Program Evaluations

Each joint program will be evaluated by appropriate criteria on a systematic basis. The Joint Administrative Council has the responsibility of ensuring that the program evaluations are performed annually.

B. Process for Program Evaluations

The College's Office of Institutional Research and Counseling Services will assist the Joint Administrative Council in program evaluation.

Program evaluation will include, but is not limited to:

1. Student attrition statistics.

2. Job placement statistics, including one and five-year follow-up studies.

XI. Miscellaneous

A. Faculty

Teaching faculty will be appointed, assigned duties, paid and evaluated in accordance with the policies and contracts in effect at the institution which has the direct responsibility for the course(s). Generally, direct responsibility for a course is determined by the location at which the course is offered.

In all cases, however, faculty must meet the minimum requirements in effect at the College as determined by the College representative(s) on the Joint Administrative Council.

B. Student Evaluation

Students will be evaluated in accordance with the academic policies and procedures in effect at the College. Special evaluation procedures for a specific program will be determined by its Joint Curriculum Committee.

C. Standardized Program Identification

All joint program courses will be assigned college course codes and nomenclature for recordkeeping purposes.

D. Termination of Agreement

Either party may withdraw from this agreement provided written notification is tendered to the other party at least two years prior to the intended date of withdrawal. Such withdrawal must coincide with the end of an academic year.

E. Joint Grant Proposals

The institutions agree to cooperate in the preparation of joint grant proposals which seek support for joint programs.

F. Promotional Materials

The institutions agree to design, develop and share the cost of promotional materials related to joint programs.

G. Registration

Joint program students will be given registration priority in the major courses of their curriculum. Other postsecondary students will be allowed to register in joint program courses on a space available basis. Secondary school students will be allowed to register for joint program courses in accordance with announced policies.

EFFECTIVE DATE

The provisions of this agreement are effective and remain in effect until appropriately revised or rescinded.

TESTIMONY

IN WITNESS WHEREOF, the parties have hereunto set their hands and respective seals and caused the corporate seals of the Community College and the County Vocational-Technical School to be affixed in accordance with the Resolution of their Boards.

Dated: ______________________

BOARD OF TRUSTEES OF THE
COMMUNITY COLLEGE

ATTEST:

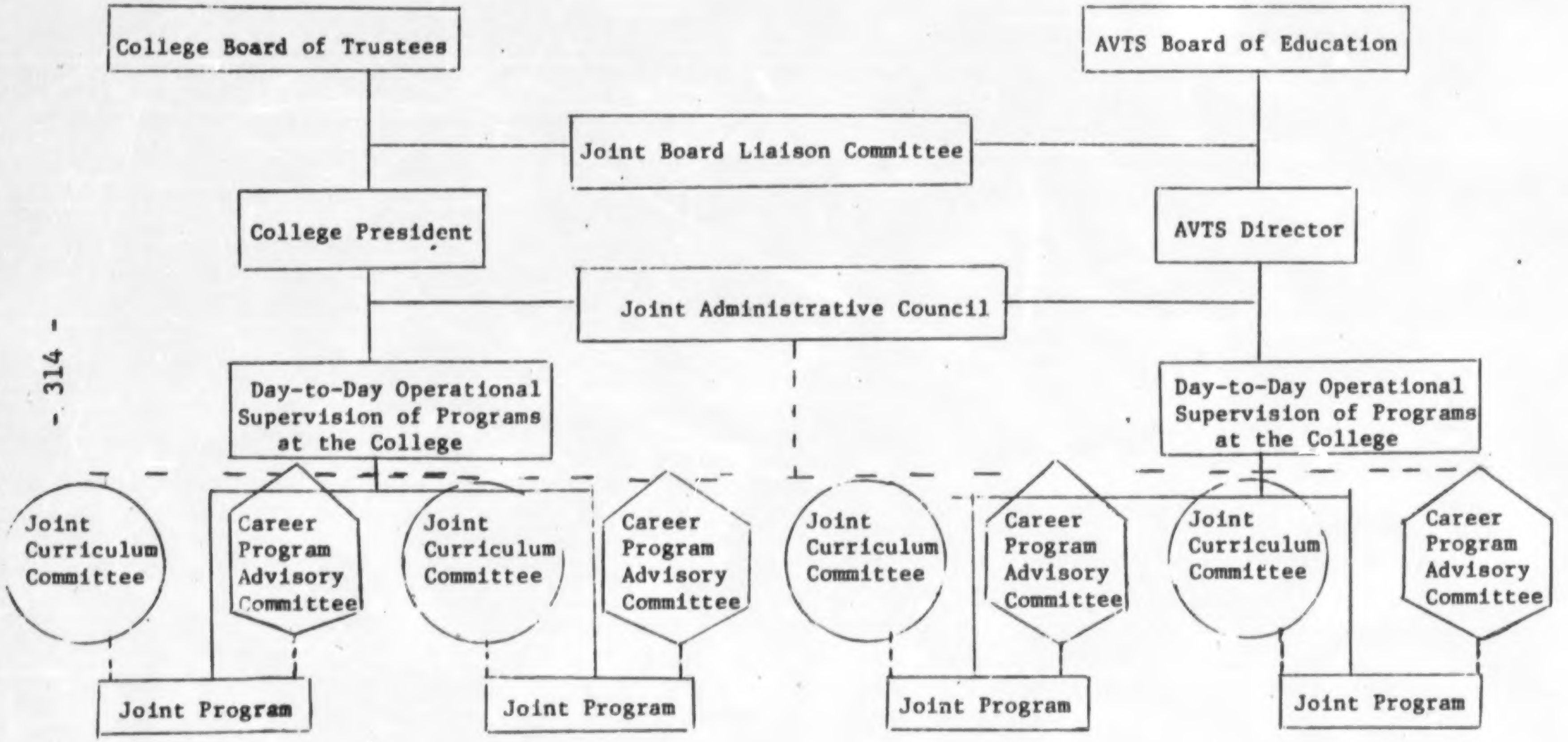
______________ ______________ BY ______________________
Secretary Chairman

ATTEST:

THE COUNTY BOARD OF
VOCATIONAL EDUCATION

______________ ______________ By ______________________
Secretary President

FLOW CHART OF RESPONSIBILITY FOR JOINT EDUCATIONAL PROGRAMS UNDER THE AGREEMENT


College Board of Trustees
AVTS Board of Education
Joint Board Liaison Committee
College President
AVTS Director
Joint Administrative Council
Day-to-Day Operational Supervision of Programs at the College
Day-to-Day Operational Supervision of Programs at the College
Joint Curriculum Committee
Career Program Advisory Committee
Joint Curriculum Committee
Career Program Advisory Committee
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